GAMBIT

Nunn's Chess Endings

Volume 1

John Nunn

The definitive work on practical endgame tactics

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Nunn's Chess Endings

Volume 1

John Nunn

GAMBIT

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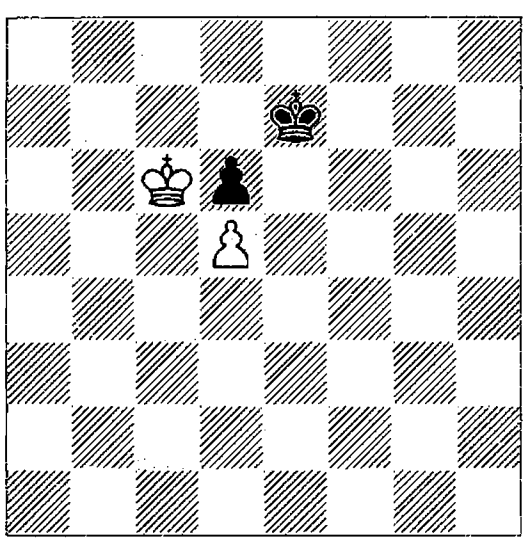
Conventions and Terminology

Most of the terms which are used in this book are either familiar chess words such as mate and stalemate, or are explained in the text of the book. However, it is worth clarifying a couple of terms which occasionally cause confusion.

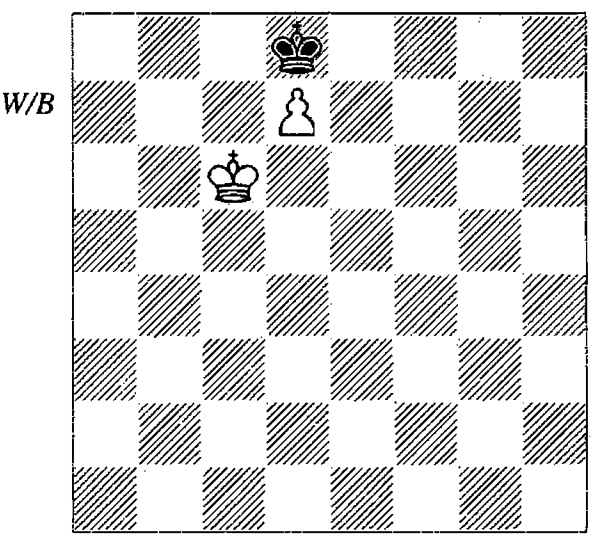
Zugzwang is a situation in which a player would prefer not to move, because any move weakens his position. Here's an example.



If it is Black to play, then any move loses his pawn, after which White wins (for example, 1...♔e8 2 ♔xd6 ♔d8 3 ♔e6 ♔e8 4 d6 ♔d8 5 d7 ♔c7 6 ♔e7). Black would prefer not to move, since he could then keep his pawn, but the rules of chess do not allow this. Thus Black is in zugzwang.

In this case, if White is to move he still wins because after 1 ♔c7 the situation hasn't really changed and Black is again in zugzwang.

The situation in the following diagram is subtly different. If Black is to play then he must weaken his position by 1...♔e7, which allows 2 ♔c7 followed by the promotion of the pawn. Thus Black to move is in zugzwang as before. However, if White is to play, he has no waiting move and cannot win, since the only move that

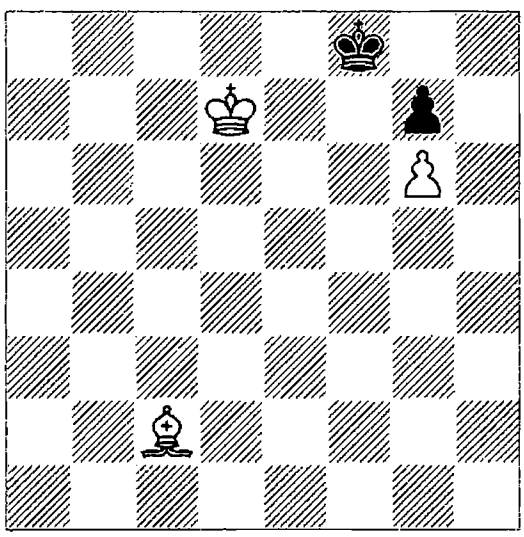


retains his pawn, 1 ♔d6, stalemates Black. Thus White to play would also prefer to pass and is thus also in zugzwang. A situation like this, in which whoever is to move must weaken his position, is called *reciprocal zugzwang*. However, in the first diagram above, White wins whoever moves first, so this is a *non-reciprocal zugzwang*. The general term *zugzwang* refers to both reciprocal and non-reciprocal zugzwangs. It turns out that reciprocal zugzwangs play a key role in a wide range of endgames, and they will crop up regularly throughout the book. In simple positions which are amenable to precise analysis, reciprocal zugzwangs differ from non-reciprocal zugzwangs in that in the former the **result of the position differs according to who moves first**. Normally, this means that when one player moves first, he loses, while if the other player moves first the result is a draw. However, in rare cases, whoever moves first loses (for example, w♔d5, ♙e4 vs b♔f4, ♙e5), and this situation is called a *full-point reciprocal zugzwang*.

Another term which can be confusing is *positional draw*. This refers to a situation in which the material balance would normally indicate a win, but the weaker side is able to draw, not

because of some immediate concrete idea such as exchanging the enemy's last pawn, but because **the superior side is unable to make progress**. Here's an example.

W



A material balance of bishop and pawn against pawn normally wins, and here there is no danger of White's pawn being captured, but nevertheless the position is a draw. The reason is that Black has a *fortress*, in other words a defensive position which White cannot break into. White can stalemate Black by, for example, 1 ♗b3 or 1 ♗d3 ♔g8 2 ♔e7 ♔h8 3 ♔f7, but he cannot win. The most common reason for a positional draw is that the defender has a fortress, but some positional draws are more complicated than the example given above.

It is interesting to note that if White has a dark-squared bishop on c3 rather than a light-squared bishop on c2, then the result is still a draw. White can try 1 ♗d4 ♔g8 2 ♔e7 ♔h8 3 ♗f6, but provided Black replies 3...♔g8! (not 3...gxf6? 4 ♔f7 and mate in three more moves) then again White cannot make progress. However, replacing the bishop with a knight results in a win. It doesn't matter where the knight starts (except for g8!), but if we put it on c2 then White wins by 1 ♘b4 ♔g8 2 ♔e7 ♔h8 3 ♘d5 ♔g8 4 ♔e8 ♔h8 5 ♘f6! gxf6 6 ♔f7 followed by mate.

I have followed one convention which is worth explaining. In discussing, for example, the ending of bishop and pawn vs bishop, one often wants to write something like 'if White's pawn is on the fifth rank, then...', but this can lead to confusion because sometimes it is Black who has the extra pawn. In many endgame books this is not a problem, since it is always assumed that White is the superior side. However, this book depends entirely on practical examples, and in these it quite often happens that it is Black who has the bishop and pawn and so references to 'White's pawn' may be confusing. Some books solve this problem by reversing the colours in those examples where Black is trying to win, but in practice you have to play Black as often as White and I believe that it is helpful to see the situation from both sides of the board. Therefore I have adopted a different solution to this problem. If I want to make a general statement about an ending, I shall write (to use the above example), 'if the attacker's pawn is on the fifth rank, then...' where it is understood that the *attacker* is the superior side, who is trying to win, while the *defender* is the inferior side, who is trying to draw. This avoids reference to White or Black and applies equally whether White or Black is the superior side. It should be clear in any given position who the attacker and defender are.

The letter 'W' or 'B' beside a diagram indicates whether it is White or Black to play. If 'W/B' appears, this means that the diagram position is considered both with White to move and with Black to move.

Where I refer to 'first rank', 'fifth rank', etc., this is always from the point of view of the player being discussed. Thus if Black plays ...♖d8-d2, I may write that 'Black occupies the seventh rank' since the rank a2-h2 is the seventh rank from Black's side of the board.

Transpositions occur fairly often in endgame books, but I dislike comments of the type "...transposing into the position after White's 11th move in line a21 on page 165, with the colours reversed and the position reflected." I don't believe anyone actually follows through such convoluted transpositions, and in this book I have attempted to avoid clumsy cross-references by repeating the relevant analysis (generally in condensed form) rather than referring to

it. There are transpositional references within a particular example, since these often serve to simplify the analysis, but not generally between different examples.

In this book, the symbols '!' and '?' have their standard chess meanings of 'good move' and 'bad move' respectively (in other words, this book does **not** use the so-called *Nunn convention* which attaches special and more rigid meanings to these symbols). However, I have assigned special meanings to two other standard chess symbols. In this book, the symbol '?!' refers to a move which makes the position more difficult but does not change the result of the position, while '!?' means a move which causes problems for the opponent, but again does not change the result.

Introduction and Other Reading

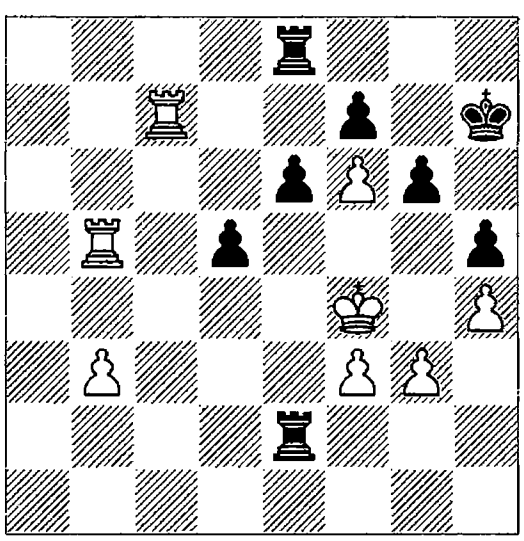
There are many books on chess endgames, and readers may wonder what reason there is to write another one, and what distinguishes *Nunn's Chess Endings* from its predecessors. I shall attempt to answer these questions in this introduction, but first let's take a look at the aims of these two volumes.

Nunn's Chess Endings is an instructional work on endgames. It's not an encyclopaedia and does not claim to consider every type of endgame in exhaustive fashion. All the major endgame classes are considered, but the focus is heavily on those endgames that arise most often in practical play. The aim of the books is to improve the reader's endgame play, and I believe that anyone who works their way right through the books will see beneficial results. In keeping with my practical philosophy, almost all the examples are from practical play, either over-the-board or correspondence. There are no artificial or esoteric positions, and no endgame studies. In each type of endgame I have selected a series of topics, most of which are examined quite thoroughly. The topics have been chosen to be both important and poorly covered in existing endgame literature.

The focus of these books is on endgames which require precise analysis. Practically all fundamental endgames (those with few pieces) fall into this category, as do many endgames in which tactical elements predominate. The long-term subtle manoeuvrings which characterize many endgames of, for example, Karpov and Smyslov, are not considered in these books. One reason for this is that the masterful endgame technique demonstrated by such players is extremely difficult to teach. While there's certainly nothing wrong in studying the games of such players, by and large you either have the talent or you don't. By contrast, the concrete positions, ideas and principles covered in *Nunn's Chess Endings* can be learned by any motivated player and will produce an immediate improvement in endgame play.

As mentioned above, tactical elements feature heavily throughout the book. However, the tactics which appear are somewhat different from those that commonly arise in middlegame positions. The following example should help to clarify this.

B



Timofeev – Guseinov
European Ch, Dresden 2007

1...g5+!

A neat finish, which I am sure most readers would be very happy to play (I know I would). By combining various tactical elements, Black either wins a rook or forces mate.

2 ♔xg5

2 hxg5 ♔g6 threatens mate by ...e5# and after 3 g4 h4 White will have to give up a rook to prevent it.

2...♖e5+ 3 ♔f4 ♖f5+ 4 ♔e3

Black's checks have forced the king into a position allowing a discovered attack which picks up a rook.

4...d4+ 5 ♔xd4 0-1

Although this is an endgame position, the combination which Black used to force victory

has no specific endgame characteristics. Indeed, the elements involved (mating threats, square vacation and discovered attack) are far more typical of middlegame play than endgame tactics. Thus, what constitutes 'endgame tactics' is not solely a matter of material. Endgame tactics typically involve those elements which are characteristic of the endgame: breakthrough, pawn promotion, zugzwang, stalemate, etc., but endgame tactics are not limited to a specific set of motifs. Any endgame position that involves precise calculation can be considered tactical, even if this involves no more than a subtle reason for playing a king to one square rather than another. In order not to overuse the word 'tactics', I call endgames requiring precise calculation *concrete endgames*, and these form the subject of these two books.

Nunn's Chess Endings takes a somewhat different approach from almost all pre-existing endgame books, and offers a number of special features. First of all, you will find some things missing. A lot of elementary endgame theory is familiar, and can be found in numerous endgame books. I decided not to include any of this basic endgame theory in the current book, as this would consume a lot of space repeating material that can easily be found elsewhere. Instead, I collected together all the necessary prerequisites and made *Understanding Chess Endgames* (Gambit, 2009) out of it. I should emphasize that it is not necessary to have this earlier book in order to read the present one, but the reader should have a level of endgame knowledge and expertise equivalent to *Understanding Chess Endgames*. I have included a few references to *Understanding Chess Endgames* in cases where I have used some specific piece of information from that book but, as mentioned earlier, similar material exists in many other books.

What, then, is in *Nunn's Chess Endings*? The main content is the careful analysis of hundreds of instructive endgames from practical play. By skipping the elementary parts, I have been able to go beyond standard endgame texts to consider more advanced topics and more complex positions. In some cases I have been able to identify new and important motifs which occur in over-the-board play, but which are often overlooked even by very strong players due to their unfamiliarity. As an example, players recognize the advantage conferred by an outside passed pawn in king and pawn endings, but this advantage is often overestimated. Section 2.7.2 (page 85) details some situations in which the outside passed pawn is less powerful than one might expect, and in some cases confers no advantage at all.

Another theme that runs through these two volumes is that real-life situations often pose unexpected problems. Endgame books tend to focus on theoretical positions which minimize the difficulties that frequently arise in practice. That is not to say that there is anything wrong with such positions, provided one realizes that they are idealized cases. Theoretical positions are constructed to show a concept as clearly as possible, and therefore are designed to eliminate enemy counterplay, awkwardly placed pieces, or any of the other problems that beset over-the-board players. However, life isn't that simple and endgames are often misplayed because, having been brought up on a diet of clear-cut theoretical examples, players are poorly prepared to cope with the complexities that the real world throws at them. Readers may feel that the positions in this book are unusually complicated, but that isn't really the case. Practical examples are often complicated, but this sad truth is disguised because of the way endgames are normally covered in textbooks. When reality intrudes into chess theory, the result is instructive but requires more work on the reader's part to gain the maximum benefit.

These days, it is practically impossible to write a good chess book without using a computer, but precisely how it has been used often plays a big part in determining how useful the resulting book is. In this book I used *Deep Fritz* and *Rybka* on a quad-core computer, together with an extensive collection of 5- and 6-man tablebases. It's easy to generate lots of analysis using a computer, but a mass of variations by itself doesn't convey understanding. Humans don't think like computers, and there's no point in simply giving computer output and expecting it to be helpful, so in these two books I have

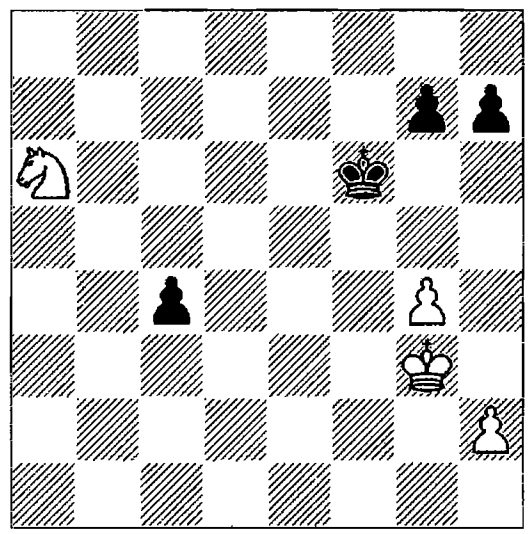
made a big effort to explain in words the ideas underlying analysis. In his book *Chess for Zebras* (Gambit, 2005) Jonathan Rowson uses the word *narrative* to describe the way in which we create stories for chess games (I hope he won't mind if I borrow his word). If Black plays ...h6, instead of giving lots of lines showing that this is a mistake, we may create the narrative that ...h6 is a mistake because it weakens the square g6. In other words, a narrative is an interpretation of a chess game which makes it easier for humans to understand. Instead of analysis, we have general ideas; instead of a proliferation of variations, we have 'key lines'.

It is important to recognize that a narrative has both positive and negative qualities. To understand this, let's take an analogy. Suppose a business is looking at last year's sales figures. The raw figures are divided up according to month, country, type of product and possibly many other criteria. It is likely that such a mass of figures will initially convey no meaning at all. However, by creating a 'business narrative', in which figures are replaced by graphs, and irrelevant data are discarded, it may be possible to deduce, for example, that one type of product sold better in Europe than in America, which may help the business plan for the future.

The problem is that the creation of a narrative involves human intervention. Going from the raw data to the narrative involves many decisions; whether the American data include sales in Canada and Mexico, which data to exclude, how the graph should be constructed. All of this means that the final narrative may not accurately reflect the original data. The time-period for the graph may be chosen to emphasize a particular trend, or the scale of the graph may be selected so as to exaggerate or understate a change. A good statistician will go to great lengths to try to ensure that the narrative does not distort the original data, but such information is often presented by people who, consciously or subconsciously, wish to offer a particular slant on the data. Politicians are, of course, masters of the art of the selective statistic.

In chess it's much the same. The only definite data are the moves of the original game. Even the choice of which variations to analyse with the computer involves a degree of subjectivity, and this is even more pronounced when it comes to creating a narrative for the game. Many classic games have a 'standard narrative' passed down through generations of annotators which is repeated again and again with little or no variation. However, these standard narratives are not always correct; some are inaccurate, while others are wildly wrong. In *Secrets of Practical Chess* (Enlarged edition, Gambit, 2007) I gave some examples of this phenomenon, but I shall find a place here for another.

B



Korensky – Suetin
Sochi 1973

This position was annotated by Suetin in *Informator 16*, and according to him it was drawn throughout. Here's what he gave: **1...h5!! 2 h3** (2 ♘b4 hxg4 3 ♔xg4 ♔g6! =) **2...hxg4 3 hxg4 c3 4 ♘b4 ♔g5 5 ♘c2 ♔f6 6 ♘e3 ♔g6 7 ♔f4 ♔h6 8 ♔f5 ♔h7 9 ♔g5 ♔g8 10 ♔g6 ♔h8 11 ♔g5** (11 g5 ♔g8 12 ♘c2 ♔h8 13 ♔f7 ♔h7 14 g6+ ♔h8! =) **11...♔g8 12 ♔f4 ♔h7 13 ♔f5 ♔h6 14 ♘c2 ♔h7 15 ♔g5 ♔h8 16 ♔g6 ♔g8 17 ♘e3 ♔h8 18 ♔f5 ♔h7 19 ♔e4 ♔g6 20 ♔d3 ♔g5 21 ♔xc3 ♔f4 22 ♔d4 ♔f3 23 ♔e5 ♔xe3 24 ♔f5 ♔f3 ½-½.**

Alburt and Krogius reproduced the ending in their book *Winning Chess Endgames – Just the Facts!* (2nd Revised Edition, CIRC 2005), and they gave:

"When a defender has a distant passed pawn, exchanges on the other side of the board are usually helpful to him because they open lines

for his king to penetrate. Furthermore, these exchanges may lead to the superior side retaining insufficient mating material.

1...h5! 2 h3

The response 2 ♘b4 allows 2...hxg4 3 ♔xg4 ♔g6 with a draw, because the knight must guard the c-pawn, and White's king cannot leave the kingside.

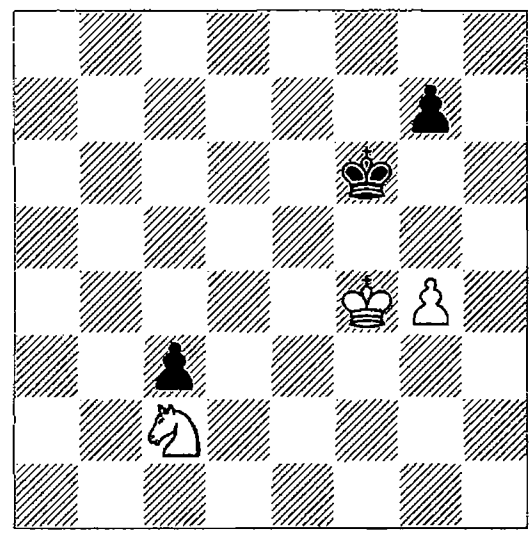
2...hxg4 3 hxg4 c3 4 ♘b4 ♔g5 5 ♘c2 ♔f6 6 ♘e3 ♔g6 7 ♔f4 ♔h6 8 ♔f5 ♔h7 9 ♔g5 ♔g8 10 ♔g6 ♔h8 11 ♔g5

The approach White chooses doesn't promise much. But if 11 g5, then 11...♔g8 12 ♘c2 ♔h8 13 ♔f7 ♔h7 14 g6+ ♔h8.

11...♔g8 12 ♔f4 ♔h7 13 ♔f5 ♔h6 14 ♘c2 ♔h7 15 ♔g5 ♔h8 16 ♔g6 ♔g8 17 ♘e3 ♔h8 18 ♔f5 ♔h7 19 ♔e4 ♔g6 20 ♔d3 ♔g5 21 ♔xc3 ♔f4 ½-½".

Apart from ending the game three moves earlier than the *Informator* version, Alburt and Krogius's analysis was move-for-move identical with Suetin's notes. The only change was the addition of some text which did not change the evaluation of any of the moves. The narrative presented by Alburt and Krogius (and also, by implication, by Suetin) is a simple one: Black exchanges as many pawns as possible on the kingside, and then White can't win because if he plays his king to the queenside then he loses his last pawn.

The trouble is that this narrative isn't even close to the truth. The writers missed virtually all the subtleties of the ending, including the fact that in the game the half-point was handed back and forth; indeed, White was winning as late as the 20th move. This is unfortunate, and not only because all mistakes are unfortunate. The analysis presented above obscures key points about knight and pawn vs pawns endings in which the 'pawns' side has an outside passed pawn. The first point is that when the outside passed pawn is relatively near the centre, even the short-range knight has the possibility to operate on both sides of the board, albeit with some difficulty. In this case the knight can be positioned on e1, restraining the c-pawn while retaining the option of moving to f3 to operate on the kingside. In this latter case the white king would head over to stop the c-pawn, while the knight holds the fort on the other side of the board. This change of roles by the white pieces is the second important point: it is often the only winning possibility in such endings, and as a result of not analysing the position correctly, Alburt and Krogius missed the chance to make the most of what is actually a very instructive example. Let's look at the correct analysis.



Korensky – Suetin
Analysis diagram

It's not really possible to make any progress with analysing the game continuation unless one realizes that this position is reciprocal zugzwang. The key point is that if White manages to get his king to g5 or f5 then he wins. The reason is that White has two possible winning ideas. The first is to use his infinite supply of reserve tempi to get his king to h7, and then win Black's g-pawn. However, this idea is not by itself sufficient to win, since Black can oscillate with his king between g8 and h8, preventing White's king from reaching h7. White can easily stalemate Black's king on h8, but in order to win he must use his second idea.

This idea only works when White's knight is on e1, and it involves moving his king to d3 and then playing ♘f3; this wins the c-pawn while setting up a barrier along the fifth rank that prevents Black's king from attacking the g-pawn. Whether this idea works depends on the time element. Let's suppose, for example, that White's king is on f5, Black's king is on f7

and White's knight is on e1. If Black is to play he must retreat his king to f8 or g8, or else White's king reaches h7, but then White plays ♔e4 and he is in time to play ♔d3 and ♘f3 before Black's king reaches g5. If it is White to play then he still wins, but first he must lose a tempo (the details are given in the analysis below). One further point is important: in general, White should avoid pushing his pawn as Black's king can then attack it more easily.

Let's assume that Black is to play in the diagram.

1...♔e6

Or:

1) 1...♔f7 2 ♔f5 ♔f8 3 ♘e1 ♔f7 and now White loses a tempo by 4 ♔g5 ♔f8 5 ♔f4! (threatening ♔e4-d3, so Black's king must return to the second rank, but then White gains the opposition) 5...♔e7 6 ♔e5 ♔f7 7 ♔f5 and it is Black to play – see the main line below.

2) 1...♔g6 2 ♘e3 (this is another reciprocal zugzwang) 2...♔h7 (2...♔f7 3 ♔f5 ♔g8 4 ♔g6 and White wins) 3 ♔g5 ♔h8 4 ♔g6 ♔g8 5 ♘c2 ♔h8 6 ♘e1 ♔g8 7 ♔f5 ♔f7 8 ♔g5 is winning for White.

3) 1...g6 2 ♘d4 ♔f7 3 ♔g5 ♔g7 4 ♘c2 ♔f7 5 ♔h6 and White wins easily.

2 ♔g5 ♔f7 3 ♘e1 ♔f8

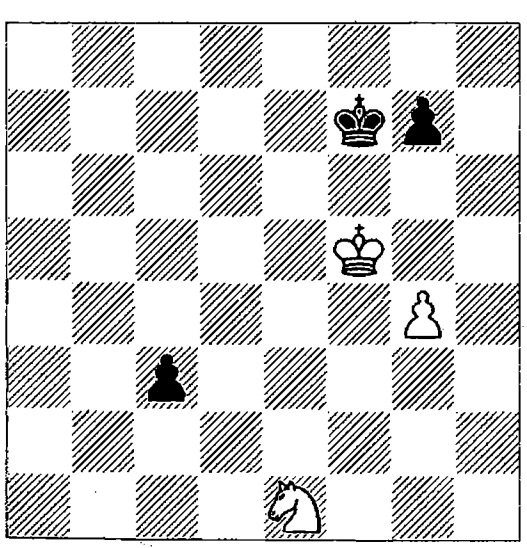
Black must retreat to the first rank, since after 3...♔e7 4 ♔g6 ♔f8 5 ♔h7 he loses at once.

4 ♔f4! ♔e7

4...♔f7 5 ♔f5 is one move quicker.

5 ♔e5 ♔f7 6 ♔f5 *(D)*

B



6...♔f8

6...♔e7 7 ♔g6 ♔f8 8 ♔h7 and White wins.

7 ♔e4

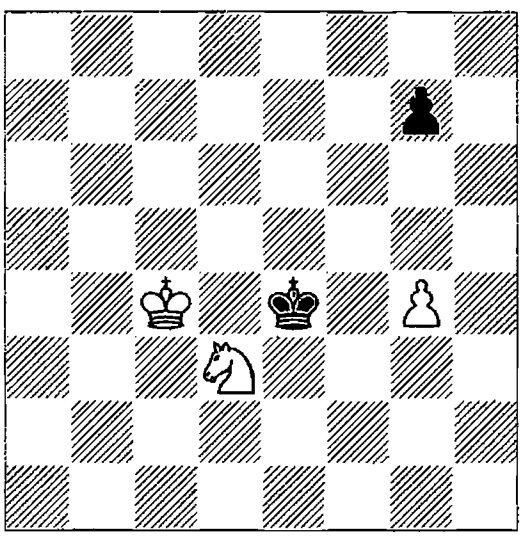
Now the black king is far enough away, so White can head for the c3-pawn.

7...♔f7 8 ♔d3 ♔e6

8...♔f6 9 ♘f3 is hopeless for Black.

9 ♔xc3 ♔e5 10 ♘d3+ ♔e4 11 ♔c4! *(D)*

B



This is again a position of reciprocal zugzwang.

11...g6

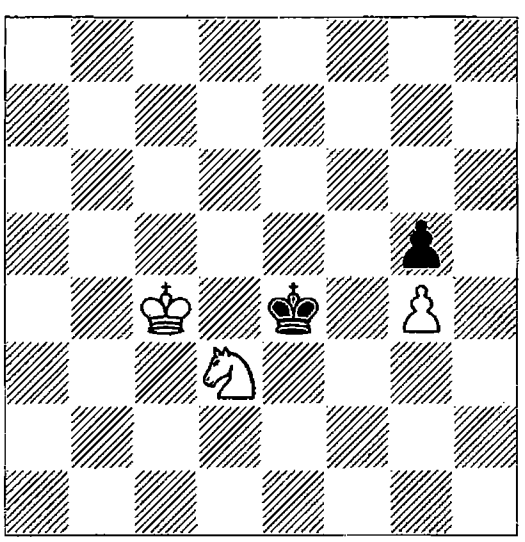
11...♔e3 12 ♘e5 ♔e4 13 ♘f7 ♔f4 14 g5 and White wins.

12 ♔c3! g5

Or 12...♔e3 13 ♘e5.

13 ♔c4! *(D)*

B



Now Black has to give way.

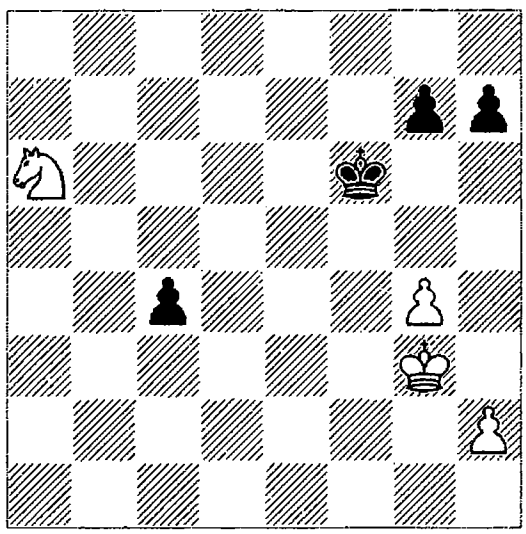
13...♔f3 14 ♘e5+ ♔e4 15 ♘f7

White defends the pawn from h6, with an easy win.

When it is White to play he cannot win, as he can never force the advance of his king; for example, 1 ♔e4 ♔g5 2 ♔f3 ♔g6! or 1 ♘e3 ♔g6 2 ♔f3 ♔g5 3 ♔g3 ♔h6! (the only move, since Black loses at once after 3...♔g6? 4 ♔f4 ♔f6 5 ♘d5+ or 3...♔f6? 4 ♘d5+) 4 ♔f4 ♔g6 and we have one of the reciprocal zugzwangs mentioned above with White to play.

Now let's return to the game position. Here it is again.

B



Korensky – Suetin
Sochi 1973

1...h5!

An excellent move and Black's only chance of survival. It is in keeping with Alburt and Krogius's remark that reducing the number of pawns on the kingside is bound to help the defender.

2 h3!?

This isn't enough to win, but it's the most promising continuation. All other moves leave White with an h-pawn, but this is worse than a g-pawn for two reasons: firstly, Black may have the option of exchanging it by pushing his g-pawn (if, for example, the white king heads for the c-pawn), and secondly it is further away from the queenside so it is harder for the white knight to fulfil the dual role mentioned above.

2...hxg4 3 hxg4 c3!

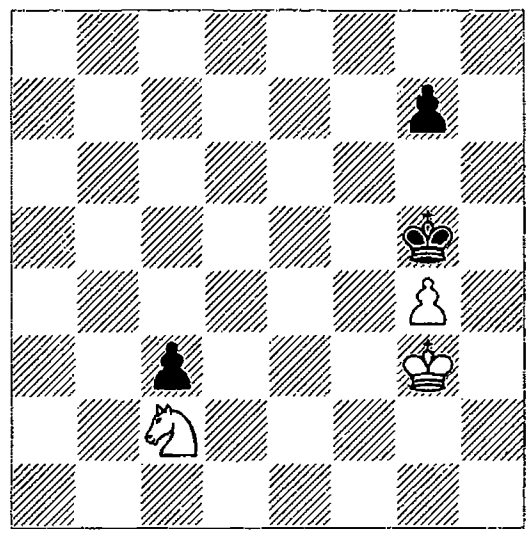
Black must take care; for example, 3...♔e5? loses to 4 ♔f3 c3 5 ♘b4 because Black's king cannot return to f6 due to ♘d5+, and so White manages to penetrate with his king to the fifth rank. This ensures a win, as we know from the analysis diagram.

4 ♘b4 ♔g5!

Once again, the only move. After 4...♔g6? 5 ♔f4 Black cannot return to f6, so again the white king can advance.

5 ♘c2 *(D)*

B



5...♔f6?

Black is unaware that there are reciprocal zugzwangs involved, and makes a losing move. He should have played 5...♔g6! 6 ♔f4 ♔f6 and it is White to play in the analysis diagram.

6 ♘e3?

White fails to take his chance and allows Black to correct his error. 6 ♔f4! would have reached the analysis diagram with Black to play.

6...♔g6?

6...♔g5!, keeping the white king at bay for the moment, would have drawn.

7 ♔f4

White hits on the correct plan and advances his king. Black cannot play 7...♔f6 due to 8 ♘d5+, so he must give way.

7...♔h6 8 ♔f5 ♔h7 9 ♔g5

With the occupation of the fifth rank, White has definitely established a winning position, but he must still hit on the plan of playing the knight to e1 in order to win.

9...♔g8 10 ♔g6 ♔h8 11 ♔g5?!

White reveals that he has not found the winning plan. This move retains a decisive advantage, but White is making no progress towards his goal. 11 g5? ♔g8 12 ♘c2 ♔h8 13 ♔f7 ♔h7

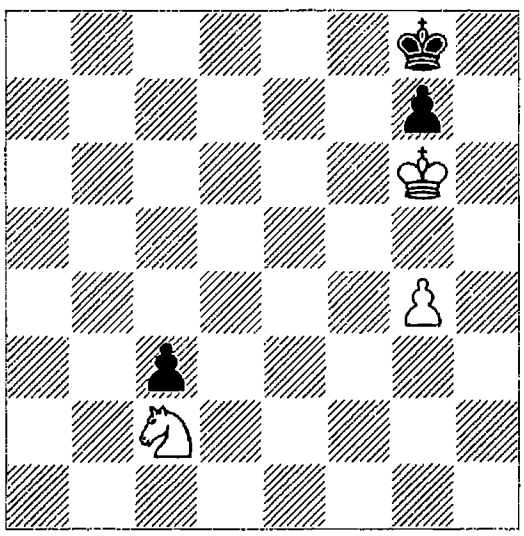
is a draw since, although White can stalemate Black, his pawn is now too exposed to allow his king to move towards the c3-pawn.

11...♔g8 12 ♔f4 ♔h7 13 ♔f5 ♔h6 14 ♘c2!

At last heading in the correct direction, and the only move to retain the win.

14...♔h7 15 ♔g5 ♔h8 16 ♔g6 ♔g8 *(D)*

W



17 ♘e3?!

Going the wrong way. The quickest win was by 17 ♘e1! ♔h8 18 ♔f5 ♔h7 19 ♔g5 ♔g8 20 ♔f4! ♔f7 21 ♔f5!, with a position we have seen before. White's failure to spot the 'dual-role' plan for the knight ends up costing him half a point.

17...♔h8 18 ♔f5 ♔h7 19 ♔e4 ♔g6 20 ♔d3?

Now White finally gives away the win. 20 ♔f4!, followed by occupying the fifth rank, would still have won.

20...♔g5 21 ♔xc3 ♔f4! 22 ♔d4 ♔f3

This position is a clear draw as White is totally tied up and can only oscillate with his king.

23 ♔e5 ♔xe3 24 ♔f5 ♔f3 ½-½

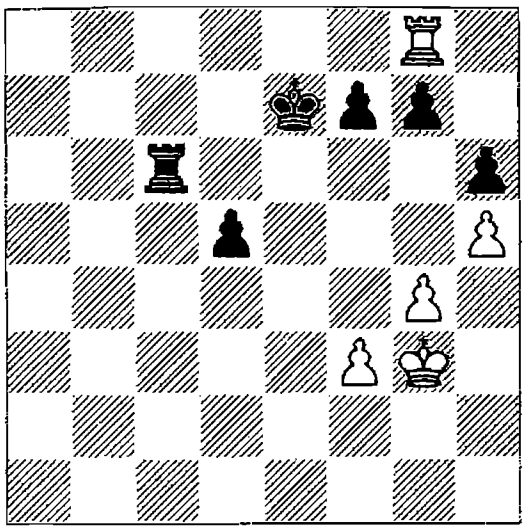
The narrative above is much richer than the insipid version offered by Albert and Krogius, and contains far more instructive points. To summarize, in endings with knight and pawns vs pawns in which the defender has an outside passed pawn restrained by the knight:

- Provided the pawn is not too far away from the other pawns, the knight still has the possibility to operate on both sides of the board.
- A possible winning plan is for the knight and king to swap roles, with the king capturing the enemy's passed pawn while the knight helps to defend the attacker's remaining pawns.
- Subtle play involving zugzwang and triangulation can easily arise.

The value of well-annotated endgames lies largely in the way in which the reader can extract such general lessons from the annotations. In this book, I have summarized the key points at the end of most sections, but a careful reader will probably get much more out of the analysis than a brief summary can provide. When playing over an example, readers should think about the ideas and general principles implied by the example. In part, my selection of positions is based on those which I personally found instructive and in the course of writing this book I feel that I have learnt a great deal about endgames. One particular surprise has been the frequency with which positions of reciprocal zugzwang turned up, even in quite unlikely situations. Evidently they are far more common than one might expect.

In this book there are many positions in which pre-existing analysis is corrected; indeed, it happens so often that readers may wonder how much earlier endgame analysis is correct. I was surprised myself at how many errors turned up during my work for this book, and concluded that analysing endgames correctly is more difficult than is generally supposed. It is perhaps not surprising that the use of computers and tablebases should turn up a considerable number of mistakes and it is unfair to criticize pre-computer analysts for overlooking subtle moves pointed out by the machine. However, it is interesting to look at such errors because they often reveal common misconceptions about the endgame. In this respect, computer analysis, which brings us closer to the absolute truth about endgames, serves to expose the doubtful assumptions which have been ingrained into generations of players. It is sometimes astonishing what a quick check turns up, and there are many cases of total chess blindness in published annotations. Here's an example.

W



Pekarek – A. Petrosian
Dortmund 1990

White is a pawn down, and cannot regain the pawn by 1 ♖xg7?? because 1...♔f8 2 ♖h7 ♔g8 traps the rook. However, thanks to White's active pieces and space advantage on the kingside he isn't in any real danger and should be able to liquidate to a drawn ending with two pawns against one.

1 g5!

The most direct route to the draw.

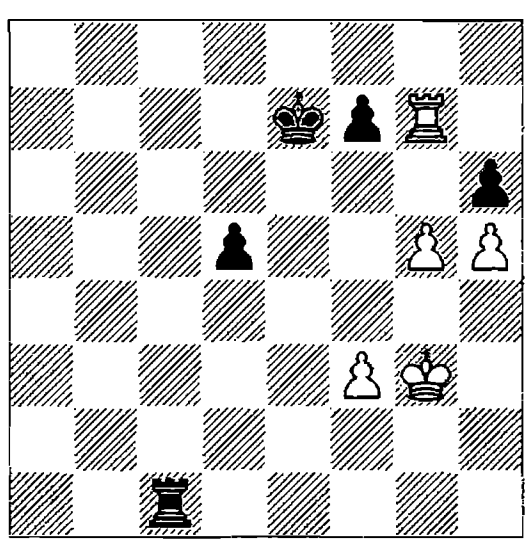
1...♖c1

After 1...hxg5 2 ♖xg7 ♔f6 3 ♖g8 ♖c1 4 ♖d8 ♔e5 5 ♖e8+ ♔f5 6 ♖d8 ♖d1 7 h6 a reduction to a drawn ending of ♖+2♙ vs ♖+♙ is inevitable.

2 ♖xg7?! *(D)*

This is given a double question mark by A.Petrosian in *Informator 49*, although it is perfectly sufficient to draw. However, 2 g6! was even simpler, since after 2...d4 3 ♔f4, for example, the draw is clear.

B



2...♖g1+

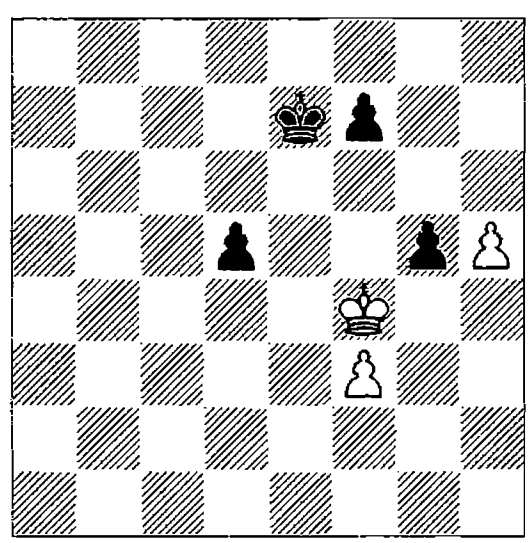
After 2...hxg5 3 h6 ♔f6 4 ♖g8 ♖h1 5 ♖d8 ♔e6 6 ♖a8 f6 7 ♖h8 ♖h5 8 h7 ♔f7 9 ♖d8 ♖xh7 10 ♖xd5 another drawn ending of two pawns against one results.

3 ♔f4 ♖xg5

A.Petrosian incorrectly claims that this wins. 3...hxg5+ isn't any better, as after 4 ♔f5 ♖g3 5 h6 ♖xf3+ 6 ♔xg5 ♖h3 7 h7 ♔e6 8 ♔g4 ♖h1 9 ♔g5 (but not 9 ♔f4? ♔f6 and Black wins) 9...d4 (otherwise Black cannot make progress) 10 ♔f4 ♔f6 11 ♖g4 ♖xh7 12 ♔e4 a drawn ♖+♙ vs ♖ position will result; for example, 12...♖h1 13 ♔xd4 ♖e1 14 ♖f4+ ♔e7 15 ♔d3.

4 ♖xg5 hxg5+ *(D)*

W



The key moment.

5 ♔xg5??

This is actually the losing move. White could have drawn quite easily by 5 ♔e5!, a move so simple that no analysis is required. What is astonishing is that both players overlooked this move, and that such a strong player as GM A.Petrosian also missed it when writing his notes. This error is instructive because it shows how easily one can by misled by ingrained chess reflexes. A series of exchanges takes place on a single square: he takes, you take back, he takes again, you take back again. It's such a familiar sequence that it is easy to play automatically and without any critical thought, and as a result overlook exceptional cases in which it's better not to make the final capture.

5...d4 6 ♔f4

6 h6 ♔f8 doesn't change the situation.

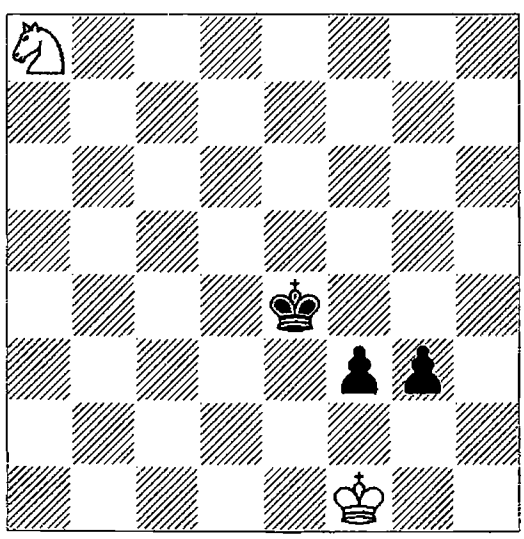
6...f5! 0-1

This nasty point decides the game at once. Black wins after 7 ♔g3 ♔f6 8 ♔f2 ♔g5 9 ♔e2 ♔xh5 10 ♔d3 ♔g5 11 ♔xd4 ♔f4.

It is harder to forgive errors in recent books where computer and tablebase assistance could have been used. Jonathan Rowson wrote in a book review in *New in Chess* that "...once you realize that analytical accuracy is not the be-all and end-all of good chess writing, and indeed often gets in the way of it, space is created for different kinds of quality, in this case humour and readability." I don't really understand this point of view; certainly readability is an important factor in virtually any book, but I see no reason why readability and analytical accuracy should be in any way exclusive. My view is that if an author makes analytical errors which could have been eliminated had he troubled to turn on *Fritz* for 0.1 seconds, it isn't likely that he paid much care and attention to the other parts of the book.

Books which claim to use computer-checking but evidently don't are a particular cause of irritation. In *Van Perlo's Endgame Tactics* (New in Chess, 2006), the introduction claims that 'Fritz 8 was consulted' and makes great play of the discoveries made by the computer, but on page 458 we find this example:

W



O'Kelly – Forintos
Bordeaux 1964

Van Perlo comments that the position is quite simple, and perhaps the *New in Chess* editors thought that it was so simple that it didn't need checking with *Fritz* or with the tablebases, but if so they were mistaken.

Although White's knight is as far away from the pawns as is possible on an 8x8 board, it can still make it back in time to save the game.

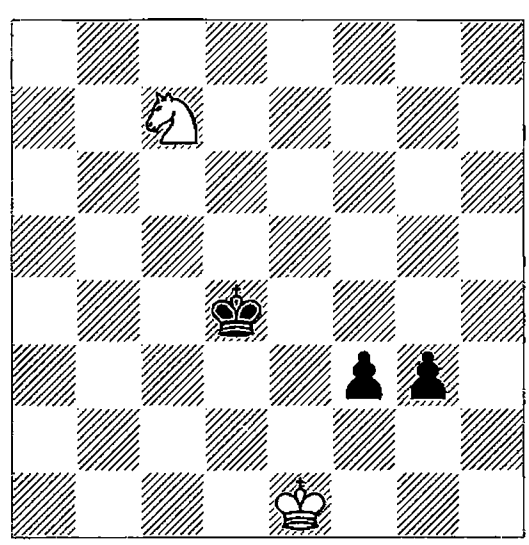
1 ♘c7 ♔d4!?

This odd-looking move at least sets a trap for White.

2 ♔e1 *(D)*

Van Perlo considers this to be the losing move, but he is wrong. One suspects that this error is derived from the analysis given by Ugrinović in the *Encyclopaedia of Chess Endings*, since Van Perlo repeats the faulty *ECE* analysis move for move. 2 ♘b5+ ♔d3 3 ♘d6 is another way to draw, but not 2 ♘e6+? when Black wins by 2...♔e3 (this is a position of reciprocal zugzwang) 3 ♔g1 g2 4 ♘g5 f2+ 5 ♔xg2 ♔e2.

B



2...♔d3 3 ♘d5?

This is actually the losing move. White can still draw by 3 ♘e6 (not mentioned by Ugrinović or Van Perlo) 3...♔e3 4 ♔f1!, reaching the reciprocal zugzwang mentioned above with Black to move, and after 4...g2+ 5 ♔g1 ♔e2 6 ♘d4+ ♔e3 7 ♘e6 the draw is clear. There was even a second draw by 3 ♘b5 ♔e3 4 ♔f1!.

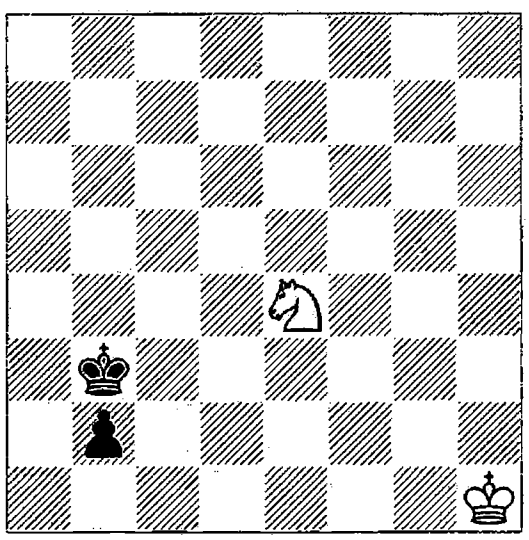
3...f2+ 4 ♔f1 ♔e4 0-1

After White's knight moves, Black wins by 5...♔f3.

At least Van Perlo's book contains many interesting examples, but what can one say about

a book such as *Pandolfini's Endgame Course* (Simon & Schuster, 1988)? Here's one position from the book.

W



One curious feature of this book is that the positions are given in diagram form, and then repeated in notation. For example, the above position is given as W: Kh1, Nf3 B: Kb3, Pb2. The reason for this was at first unclear to me, but then I realized that several of the diagrams are wrong (for example, in addition to the above, those on pages 35, 130, 186 and 232) so readers are helpfully provided with a second description of the diagram to help them work out the intended position. The fact that Pandolfini considers 1 ♘d4+? indicates that the notation is correct and the knight is actually on f3. OK, so the diagram's wrong, but what about the analysis? Pandolfini considers the position to be a draw and gives 1 ♘d2+ ♔c2 2 ♘c4 b1♕ 3 ♘a3+ ♔c1 4 ♘xb1 ♔xb1 as his main line. The problem is that 2...b1♕ is check, White's third move is illegal and so the position is winning for Black.

It's amazing not only that such errors should find their way into a book in the first place, but also that such obvious mistakes remain after many reprints spanning 20 years.

Note that I am not arguing that a chess book should be automatically condemned for having a few analytical errors; it all depends on what the author is trying to achieve. A book such as Pandolfini's, which contains only basic positions, should be free of errors, but there are excellent authors who tackle very difficult pieces of analysis, and here errors are inevitable. If you aim higher, the chances of a slip are greater. I have put a lot of effort into avoiding analytical mistakes in *Nunn's Chess Endings*, but some of the positions involve complex analysis and then the possibility of errors arises, although I believe there are likely to be few. However, if (or when) 7-man tablebases become available, there will doubtless have to be corrections and refinements in the analysis.

Not all endgame books are bad. Some recent books that I enjoyed and can recommend include:

Fundamental Chess Endings by Karsten Müller and Frank Lamprecht (Gambit, 2001)

Dvoretsky's Endgame Manual by Mark Dvoretsky (Russell Enterprises, 2006)

Practical Endgame Play – beyond the basics by Glenn Flear (Everyman, 2007)

Silman's Complete Endgame Course by Jeremy Silman (Siles Press, 2007)

How to Play Chess Endgames by Karsten Müller and Wolfgang Pajeken (Gambit, 2008)

Back to *Nunn's Chess Endings*. The layout of the book is simple enough. There is a chapter describing the skills needed in order to play the endgame well, after which the contents are divided by material. Volume 1 (this book) contains pawn endings, minor-piece endings and queen endings. Volume 2 contains rook endings and endings with rooks and minor pieces. In other words, Volume 1 covers all endings without rooks while Volume 2 deals with all endings with rooks. In each chapter there are several sections, each devoted to a particular topic.

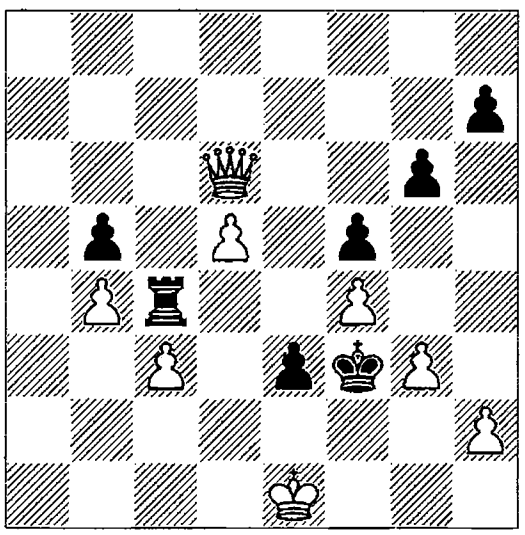
The chapters are more or less independent of each other, but within each chapter there is a progression. So, while it is possible to start with knight endings and go back to pawn endings later, it is advisable to read the knight endings chapter from start to finish. The simplest, of course, is just to read the whole book starting from the first page!

1 The Three Key Endgame Skills

Various skills are required to play the endgame well, but three are more important than any others, especially for the concrete endgames considered in this book. These three skills are calculation, knowledge and imagination.

I have selected three positions, each emphasizing one of these qualities. If you do not attempt to analyse any of the other positions in this book by yourself, I would urge you at least to try to solve these positions before looking at the analysis given later in the chapter. Here are the three positions.

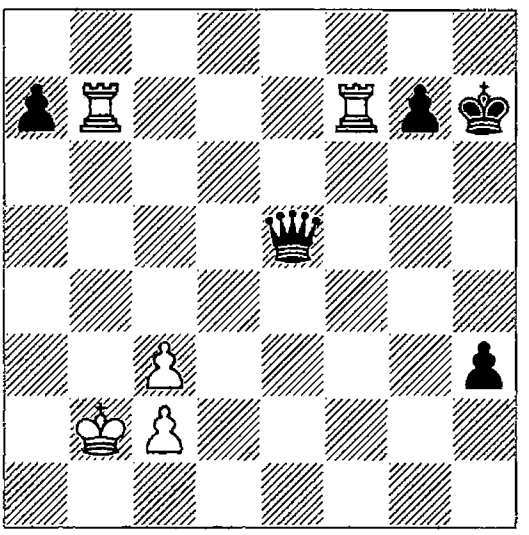
B



In the first position it's Black to play. White has what would normally be a decisive material advantage, but his king is trapped on the first rank and is in serious danger. Moreover, Black's king is relatively secure so White is unable to disrupt the potential mating-net by checking the enemy king. Your task is to evaluate the position.

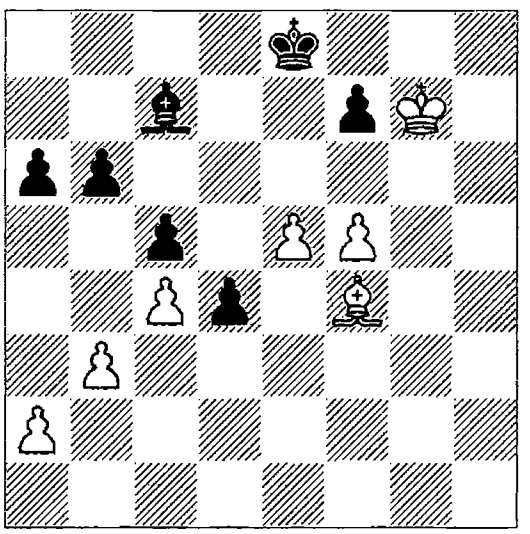
The second position, in which White is to play, is at the top of the following column. Black's kingside passed pawns are very dangerous and indeed the advanced h-pawn is just two squares away from promotion, but White's

W



rooks are poorly placed to stop this pawn. Is there any plan that gives White a chance to save the game?

B



The third position appears very unpleasant for Black. White's pieces, especially his king, are very active and he threatens to force an immediate win by e6. Black's only real asset is his protected passed d-pawn, but this scarcely seems likely to make any difference in view of White's deadly threats. In the game Black lost in only two more moves: **1...♗d8 2 f6 d3 3 e6 1-0**. Was there any way Black could have saved the game?

After a short discussion, we shall return to these three positions and take a look at the solutions.

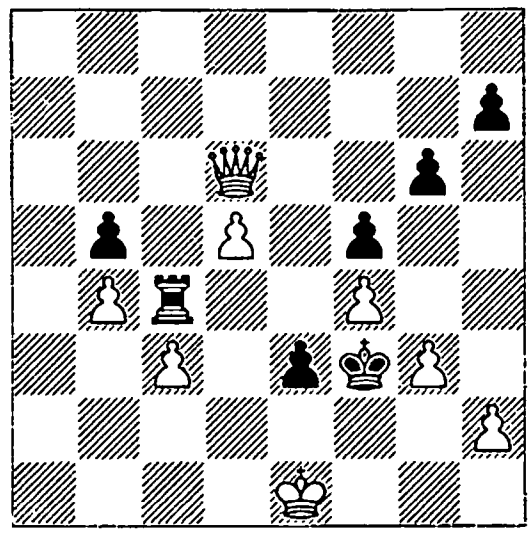
Calculation

Calculation is important in every phase of the game, and it is wrong to imagine that it is less important in the endgame than in the middlegame. Middlegame positions are often murky, and the best move may well be a matter of opinion, with even grandmasters disagreeing on the correct course of action. Although calculation is often helpful, intuition and experience also play a large role in middlegame decisions. By contrast, endgame positions are often more susceptible to concrete analysis, and with sufficient effort a definite evaluation can be given. Finding the right move is then more a question of analytical ability than intuition, with everything depending on the speed and accuracy of a player's calculations.

Although every chess position has, in theory, just three possible evaluations – win, draw or loss – in practice one tends to evaluate middlegame positions in a more continuous fashion, for example as 'slightly better for White', or what the computer might give as '+0.3 pawns'. A middlegame slip by White may result in such a position becoming equal, but the consequences are often not especially serious. An advantage of 0.3 pawns is not that great to begin with, and the position may remain complicated, with plenty of scope for outplaying the opponent later. However, endgame errors are often more serious, and may, for example, immediately turn a win into a draw. Moreover, the resulting position may offer little scope for turning the game round again at a later stage. Thus endgame positions, especially those of the type considered in this book, are very demanding on a player's calculating ability. Faulty calculation is more likely to lead to a mistake, and a mistake is more likely to result in serious consequences.

Now let's return to the first position given above. It is repeated at the top of the next column.

B



Krueger – Bauer
West Germany 1971

In *Informator 12*, Marić considered this position to be winning for White, whereas the correct result is a draw and then only after accurate play by White.

1...♖xc3 2 ♕c6!

The only move, for otherwise White loses at once.

2...♖c4!

A curious situation of mutual paralysis exists along the c-file, and the result depends on moves of the kingside pawns.

3 ♔f1?

This wastes time and gives Black a winning position. White should have continued 3 h3! h6 (3...e2 4 g4 h6 transposes, while the complicated line 3...h5 4 ♔f1! g5! 5 fxg5 h4 6 gxh4 f4 7 ♔e1 e2 8 ♕e6 ♖c1+ 9 ♔d2 ♖d1+ 10 ♔c2 ♔f2! 11 ♕e5 f3 12 ♕h2+ leads to perpetual check) 4 g4 e2 (4...h5? 5 g5 h4 6 ♔f1 is a full-point reciprocal zugzwang; Black is to play, so he loses) 5 g5 hxg5 6 fxg5 (this position is a half-point reciprocal zugzwang; if it were White to play, he would be helpless) 6...f4 (opening the diagonal from e6 to g4 offers White a defensive resource) 7 ♕e6! ♖c1+ 8 ♔d2 ♖d1+ (8...e1♕+ 9 ♕xe1 ♖xe1 10 ♔xe1 ♔g2 11 d6 f3 12 d7 f2+ 13 ♔d2 f1♕ 14 d8♕ is also a draw) 9 ♔c2 e1♕ 10 ♕g4+ (this is the move that exploits the newly-opened diagonal, but White's pawn must be on h3 in order to take advantage of it) 10...♔e4 11 ♕xd1 with a draw whether or not Black exchanges queens.

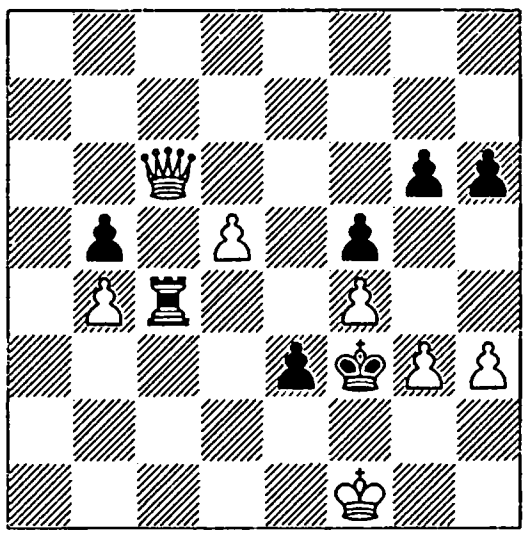
3...h6

White is now losing because he has no time to play h3 and g4.

4 h3 *(D)*

Too late, but 4 h4 also loses after 4...e2+! (Marić only analysed 4...♔xg3??, which loses to 5 ♔e2) 5 ♔e1 h5 and we reach a full-point reciprocal zugzwang with White to play; after 6 ♕e6 ♖c1+ 7 ♔d2 ♖d1+ Black will be a rook up.

B



4...h5??

Giving away the whole point. Black could have won by 4...g5! 5 h4 gxh4! (Marić only mentioned 5...g4??, which loses to 6 h5 with yet another full-point reciprocal zugzwang) 6 gxh4 h5 7 ♔e1 e2 and White falls into zugzwang.

5 h4

Now it is Black who falls into zugzwang.

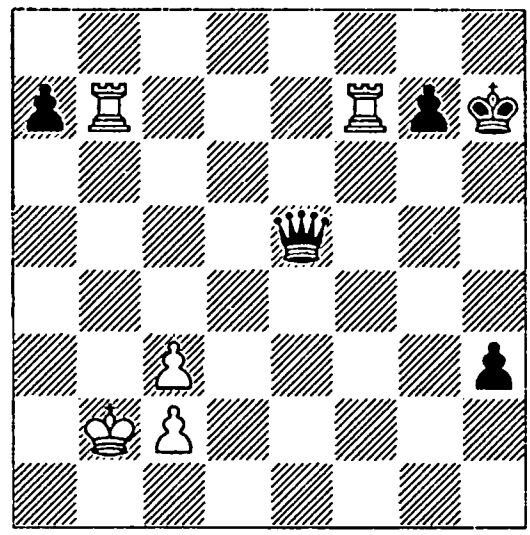
5...e2+ 6 ♔e1 ♔e3 7 ♕e6+ 1-0

Knowledge

Memory plays an important part in opening theory, because one can hardly expect to work out a complex opening variation over the board. A similar principle applies in the endgame: there are some positions in which the result is not at all obvious, and knowing the result without calculation gives you a head start when it comes to finding the right move. This applies especially if one can identify a target position having the desired result, since then the task is reduced to finding a way to reach the target.

Let's look again at the position given earlier.

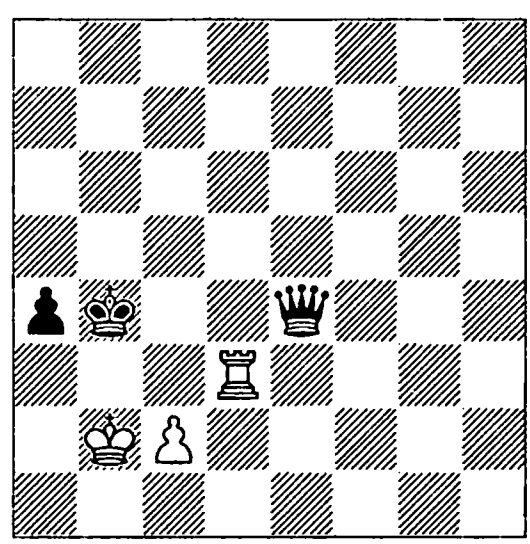
W



Honfi – Kallinger
corr. 1989-92

White's position appears so desperate that one might even consider resigning. The h-pawn is just two squares away from promotion and it seems that White will soon have to retreat his rooks to the first rank to stop it, after which Black wins easily by advancing the g-pawn. Nevertheless, White managed to save the game with a defensive plan based on knowledge of the following position.

W



Honfi – Kallinger
Analysis diagram

Although ♕+♙ normally win against ♖+♙, in this exceptional position Black is unable to make progress and the position is a draw whoever moves first. If White is to play, he can draw by 1 ♖a3! (the only move as 1 ♔a2?, for example, loses after 1...a3! and the fortress is broken, with Black winning after 2 ♖b3+ ♔c4 3 ♔xa3 ♕xc2

4 ♖b4+ ♔c5, etc.) 1...♕e5+ 2 ♔a2! ♕e2 3 ♔b2 ♕f2 4 ♖d3! (the only drawing move) 4...♕f6+ 5 ♔a2! and Black cannot make progress. White keeps his rook on d3 or a3, and if checked moves his king between b2 and a2.

In the Honfi-Kallinger position we can already see the outlines of this draw in the queenside pawn-structure. It may be that against the best play by Black, White's defence would not have been sufficient for a draw. However, since everything else is hopeless, the plan White adopted is undoubtedly the best chance. Moreover, a well-planned and unexpected defensive idea often throws the opponent into confusion and leads to success even if objectively speaking it is not quite sufficient. That's what happened here, even though this was a correspondence game. It also helped that White knew precisely what he was aiming for, while Black may not have appreciated the point of White's defence until it was too late.

White's first task is to give up a rook for Black's two kingside pawns.

1 ♖f3! ♕h5

There is nothing better. The only real alternative is 1...h2 2 ♖h3+ ♔g8 3 ♖b4 (threatening ♖bh4) 3...g5 4 ♖d4 (now the threat is ♖d2) 4...♕c7! 5 ♔c1! (the only move, as Black was threatening ...h1♕ followed by ...♕b7+) 5...a5 6 ♖d2 h1♕+ 7 ♖xh1 ♕xc3, which retains some advantage for Black, although against accurate defence it is probably not enough to win. If Black plays 1...♕e6, then 2 ♖g3 forces 2...♕h6, transposing to the game.

2 ♖g3 ♕h6

This is forced, since otherwise the g7-pawn falls. 2...h2? would even lose after 3 ♖gxg7+ ♔h8 4 ♖ge7, when Black must give up his queen.

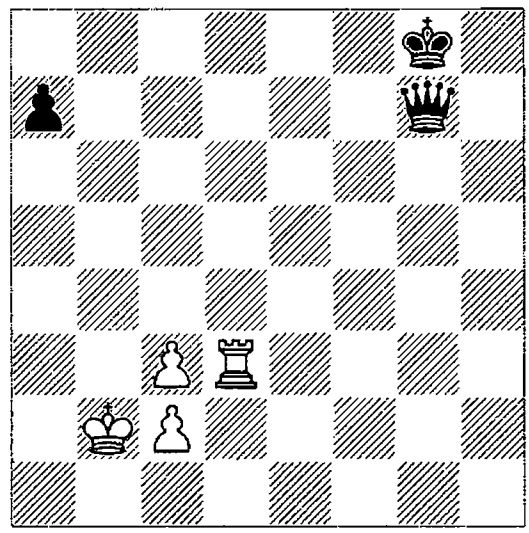
3 ♖bxg7+!

Not 3 ♖g1? h2 4 ♖h1 ♕d6 5 ♖f7 ♕b6+ 6 ♔a3 ♕g1 7 ♖f1 ♕g2, followed by the advance of the g-pawn, and Black wins.

3...♕xg7 4 ♖xh3+ ♔g8 5 ♖d3 *(D)*

This is White's idea. The position without the c3-pawn is the above positional draw, so White only needs to play c4 and clear the third rank in order to save the game.

B



5...♕b7+?

Black immediately goes wrong since abandoning the pin on the c3-pawn makes it easier for White to play c4. The correct continuation is 5...♕e5! and now I cannot see how White can reach the drawing position; for example, 6 ♔a2 (6 ♔c1 a5 7 c4 ♕a1+ 8 ♔d2 a4 9 c5 ♕h1! is winning for Black) 6...♕a5+ 7 ♔b2 ♕b5+ 8 ♔a1 (8 ♔a2 ♕c4+ and 8 ♔c1 ♕c4 are much the same) 8...♕c4 9 ♔b2 a5 10 ♖d4 (10 ♔a3 a4) 10...♕b5+ 11 ♔a2 ♔f7 (Black improves his position while White still cannot push the c3-pawn) 12 ♖d3 (12 c4 ♕a4+ 13 ♔b2 ♕b4+ 14 ♔a2 ♕c3 wins for Black) 12...♕c4+ 13 ♔b2 a4 and Black has a winning position. This winning line can only be found if Black understands White's defensive plan, and realizes that he must prevent c4.

6 ♔c1!

After 6 ♔a2? ♕a6+ 7 ♔b2 ♕b5+ Black transposes into the winning line given in the previous note.

6...a5

Even if Black tries to repeat the previous position by 6...♕g7, it is unlikely that he can win after 7 ♔b1 since his queen is badly placed to prevent c4.

7 c4!

Now White only needs to get his king back to b2 to draw, but this is readily accomplished by pushing the front c-pawn and thereby deflecting Black's queen.

7...♕b4

Or 7...a4 8 c5 ♕b4 (after 8...♕b5 9 c6 ♕xc6 10 ♔b2 White reaches his target position) 9 c6

a3 10 c7 ♕e1+ 11 ♖d1 ♕e3+ 12 ♖d2 and Black cannot win.

8 ♖b3 ♕xc4 9 ♔b2 a4 10 ♖d3 ½-½

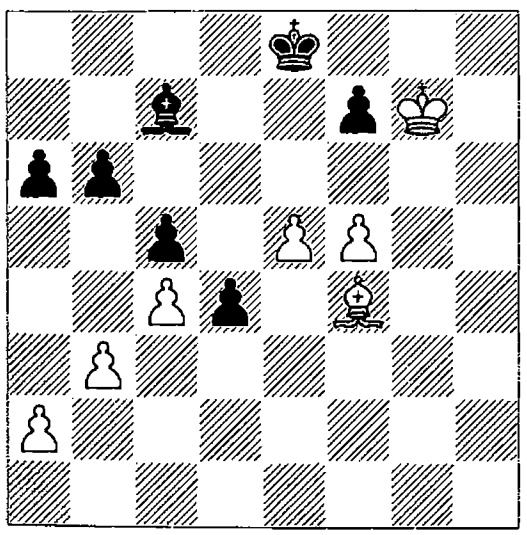
White draws as in the analysis diagram.

Imagination

No matter how much you study chess, there will always be positions which require a novel approach. The possibilities in chess are truly astronomical, and while knowledge is an important factor, nobody can hope to be prepared for every eventuality that might arise on the board. When an unusual situation occurs, imagination is often the deciding factor. The player who goes the extra distance in looking for something special will find the solution, while another without the will-power and creative ability will miss it. Many times players give up in 'obviously lost' positions and don't bother to search every nook and cranny looking for a possible resource, instead contenting themselves with playing a few desultory moves and then resigning.

As an example, let's return to the position given earlier.

B



Biolek – Balabaev
Olomouc 2004

As mentioned earlier, Black lost in only two moves: **1...♗d8? 2 f6** (now there is no defence to the threat of e6) **2...d3 3 e6 1-0**. Marin's notes in MegaBase indicate that Black is already lost in the diagram position, yet there is a hidden saving resource.

First let's look at a plausible but inferior try for Black.

1...♔e7?

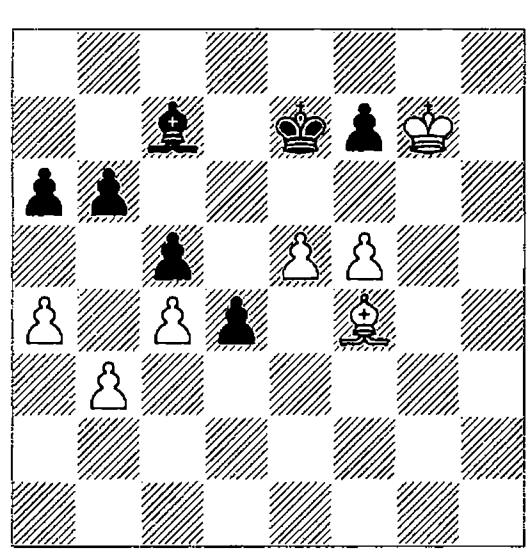
This puts up more resistance than the move played, but White retains a large advantage, which analysis suggests is likely to be enough to win.

2 a4!

White should improve his pawn-structure on the queenside before undertaking further action. This move not only makes it harder for Black to play ...b5, but it also introduces the possibility of playing a5 at some point to break up Black's pawns. Black can prevent this by playing ...a5 himself, but this puts another pawn on a dark square and then the pawn could become vulnerable if the white bishop manages to penetrate amongst Black's pawns. Heading for the win of a piece directly by 2 ♗g5+ ♔e8 3 e6 fxe6 (3...♗e5+? loses to 4 f6 fxe6 5 ♗f4!) 4 f6 ♗d6 5 f7+ ♔d7 6 f8♕ ♗xf8+ 7 ♔xf8 only leads to a draw: 7...e5 8 ♔f7 e4 9 ♔f6 ♔d6 10 ♔f5 e3 11 ♗f4+ ♔e7! (not 11...♔c6? 12 ♔e6 and White wins after 12...♔b7 13 ♔d7 ♔a7 14 ♔c7 a5 15 a4 or 12...b5 13 a4) 12 a4 a5 13 ♔e5 ♔d7 14 ♗g5 ♔e8 15 ♔e6 ♔f8 and White cannot win as Black is always ready with a counterattack if White's king heads for the b6-pawn.

We now return to 2 a4! *(D)*:

B



2...a5

Or:

1) 2...♗b8 3 ♗g5+ and now:

1a) 3...♔e8 4 ♔f6 ♗c7 (4...♔d7 5 ♔xf7 ♗xe5 6 ♗c1 transposes to line 1b) 5 e6 ♗d8+ 6

♔g7 f6 7 ♗f4 ♔e7 8 ♔g6 ♔e8 9 ♗d6 a5 10 ♔g7 ♗e7 11 ♗c7 (now Black must push the d-pawn) 11...d3 12 ♗f4 ♗d6 13 ♗d2 ♗e5 14 ♔g6 followed by rounding up the d-pawn with the king gives White a decisive advantage; for example, 14...♗b2 15 ♔h5 ♗a3 16 ♔g4 ♗b4 17 ♗xb4 axb4 18 ♔f3 and White is just in time.

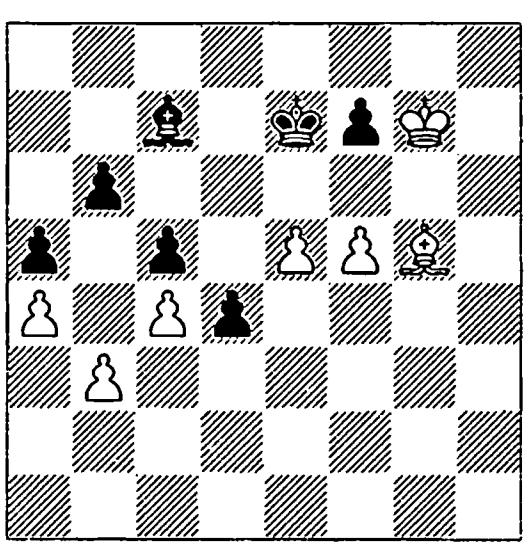
1b) 3 ♔d7 4 ♔xf7 ♗xe5 5 ♗c1 ♗d6 6 f6 ♗e5 7 ♗d2 ♗d6 (7...♔d6 loses after 8 a5! bxa5 9 ♗xa5 ♔d7 10 ♗d2 d3 11 ♔g6 ♗d6 12 f7 ♗f8 13 ♔h7 ♔e6 14 ♔g8 and now White can promote) 8 ♔g8 ♔e6 9 f7 ♔e5 (9...a5 10 ♗f4 ♗e7 11 ♗h6 ♔e5 12 ♗f8 ♗xf8 13 ♔xf8 leads to a winning queen ending in which Black's pawns start to fall) 10 a5 bxa5 11 ♗xa5 ♔e4 12 f8♕ (this wins thanks to the preliminary a5, which has left the c5-pawn weak) 12...♗xf8 13 ♔xf8 ♔d3 14 ♔e7 ♔c2 15 ♔d6 and White is just in time to defend the c4-pawn.

2) 2...d3 (this denies the black king a route to attack White's queenside pawns) 3 ♗g5+ ♔e8 4 e6 fxe6 5 f6 ♔d7 6 f7 ♗d6 7 f8♕ ♗xf8+ 8 ♔xf8 ♔d6 9 ♗d2! ♔e5 10 ♔e7 and White wins as the possibility to penetrate via d3 and c2 is no longer available.

3 ♗g5+ *(D)*

3 ♔g8? allows Black to draw by 3...f6 4 exf6+ ♔xf6 5 ♗xc7 d3 6 ♗f4 ♔xf5 7 ♗c1 d2! 8 ♗xd2 ♔e4.

B



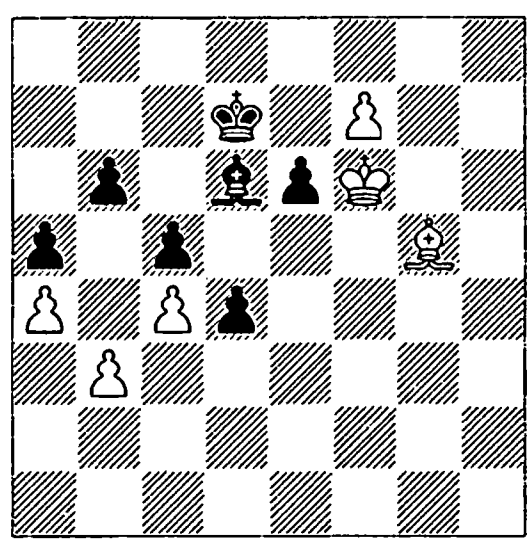
3...♔e8

3...♔d7 also does not save Black after 4 ♔xf7 ♗xe5 5 f6 ♗d6 6 ♗d2! (White must manoeuvre to pass the move to Black) 6...♗e5 (6...♗g3 7 ♔g8 ♔e6 8 f7 ♗d6 9 ♗f4 ♗e7 10 ♗h6 transposes to line 1b of the note to Black's second move) 7 ♗c1 ♗d6 (7...♔d6 8 ♗g5 ♔d7 9 ♔g8 also wins for White) 8 ♗g5 d3 (this weakens Black's pawns, but he had little choice since 8...♗e5 9 ♔g8 ♗d6 10 f7 ♔e6 11 ♗f4 transposes to the 6...♗g3 line above) 9 ♗d2 ♗e5 10 ♔g6 ♗d6 11 f7 ♔e6 12 ♔g7 and White wins as the d3-pawn blocks the enemy king.

4 e6 fxe6 5 f6 ♔d7 6 f7 ♗d6 7 ♔f6! *(D)*

After 7 f8♕?? ♗xf8+ 8 ♔xf8 ♔d6 Black even wins.

B



7...♗f8

Or 7...♗e7+ 8 ♔g6 ♗f8 9 ♗f6 e5 10 ♔f5 d3 11 ♗g5 ♔d6 12 ♔e4 ♔e6 13 ♔xd3 ♗e7 14 f8♕ ♗xf8 15 ♗d8 ♔f5 16 ♗xb6 e4+ 17 ♔e2 ♔e6 18 ♗xa5 with a technical win based on the extra pawn and passed a-pawn.

8 ♗f4 d3

8...e5 9 ♗xe5 and White wins.

9 ♗d2 ♔d6 10 ♗g5

Now Black is in zugzwang.

10...♔d7

10...e5 11 ♔f5 also wins for White.

11 ♗f4 ♗e7+ 12 ♔g7 e5 13 ♗g5 ♗d6 14 ♔f6 e4 15 ♗e3 ♗f8 16 ♗f4

Black is again in zugzwang and White wins after 16...♔d8 17 ♔e6 ♔c8 18 ♔d5 or 16...♗e7+ 17 ♔e5 ♗f8 18 ♔xe4 ♔e6 19 ♔xd3 ♔xf7 20 ♗c7, when Black ends up two pawns down.

Now we move on to examine Black's correct defence.

1...d3! 2 e6

Forced, or else ...♗xe5 wins.

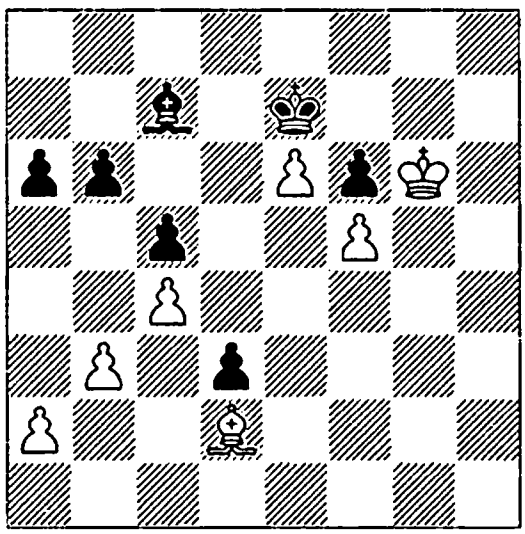
2...f6 3 ♗d2 ♔e7

3...♗e5? 4 a4 ♗b2 5 ♔g6 wins for White.

4 ♔g6 *(D)*

4 ♗c3 is met by 4...♗e5 5 ♗xe5 fxe5, leading to a drawn queen ending.

B



This is the critical position. Black's situation appears dire, because White intends to play his king back and round up the d3-pawn, after which he has a simple technical win. Black appears to have no way to challenge White's bishop and make something of his d-pawn. At this point Marin gave only 4...♗e5? 5 ♔h5, when White wins, but there is a hidden defence.

4...b5!

The key move; at first sight irrelevant, it is actually a cunning way to make use of the d-pawn by introducing the threat of 5...♗a5! 6 ♗xa5 b4, promoting the d-pawn. This is an example of how imagination is an essential component of good endgame play: the deflection + cut-off idea is unusual, but in this position it enables Black to save an otherwise hopeless position.

5 a3!

The most challenging move, as other moves allow Black to draw more easily:

1) 5 b4 ♗d6! 6 bxc5 ♗xc5 7 cxb5 axb5 8 ♔h5 ♔d6 9 ♔g4 ♔e5 10 ♗c3+ ♔e4 is a clear draw as White cannot make progress.

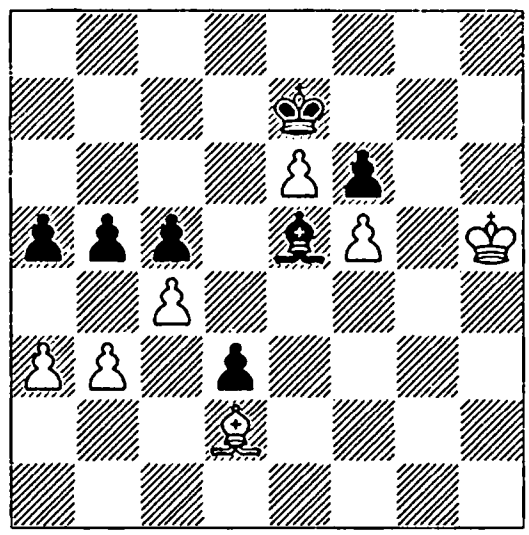
2) 5 ♗c3 ♗e5 6 ♗xe5 d2 7 ♗xf6+ ♔f8! (7...♔e8? loses to 8 ♗g5 d1♕ 9 f6 ♕d3+ 10 ♔g7 ♕d4 11 ♔g8) 8 ♗g7+ ♔e7 9 f6+ ♔xe6 10 f7 d1♕ 11 f8♕ ♕d3+ 12 ♔g5 ♕g3+ with perpetual check.

5...♗e5!

Not 5...bxc4? 6 bxc4 ♗e5 7 ♔h5 ♗b2 8 ♔g4 ♗xa3 9 ♔f3 ♗b4 10 ♔e3 a5 11 ♔xd3 a4 12 ♔c2 ♔d6 13 ♗c3 ♔e7 14 ♗xb4 cxb4 15 c5, when White wins.

6 ♔h5 a5! *(D)*

W



Threatening to win with ...a4.

7 cxb5 a4 8 bxa4 c4 9 ♗b4+

9 ♔g4 c3 10 ♗xc3 ♗xc3 11 ♔f3 d2 12 ♔e2 ♗a5 is a draw.

9...♗d6 10 ♗a5 ♗f4 11 ♔g4 d2 12 ♗b4+ ♔d8! 13 ♗xd2 ♗xd2 14 b6

14 ♔f3 ♗a5 15 ♔e2 ♔e7 is also drawn.

14...♗e3 15 b7 ♗a7 16 ♔f3 ♔c7 17 a5 ♗c5 18 a6 ♗xa3 19 ♔e2 ♗b4 20 ♔d1 ♗d6 21 ♔c2 ♗b4 22 ♔b2 ♔b8

White cannot make progress.

The three skills described in this chapter are fundamental to good endgame play and all can be developed by studying *Nunn's Chess Endings*. Since these two books focus on concrete positions in which calculation plays a major role, there is plenty of material to help develop endgame calculating ability. Rather than play over the analysis straight away, you should think for at least a few minutes about each position to see if key points can be identified and a possible main line sketched out. Your knowledge will inevitably be improved, since the books cover a wide range of fundamental endings and explain key themes in each type of ending. Imagination cannot easily be taught, but there are plenty of positions here which should serve to open new vistas on the chessboard.

2 Pawn Endings

2.1 Introduction

King and pawn endings are the most basic type of ending, since every other type of ending can reduce to a pawn ending via piece exchanges. In keeping with the general philosophy of *Nunn's Chess Endings*, I shall jump over elementary theory such as king and pawn vs king, the 'square' of the passed pawn, exploiting an extra pawn and so on. Such basic topics are covered in virtually every endgame book, including, of course *Understanding Chess Endgames*.

The first major idea we shall explore is that of zugzwang (Section 2.2, page 28). In most chess positions, it is better to have the move than not, but in the endgame this is not always the case and sometimes it is better to have the opponent move first, since any move he makes will involve a concession. This is the situation of *zugzwang*, and it occurs more often in king and pawn endings than in any other type of ending. The most common type of zugzwang in pawn endings involves the *opposition*, in which two kings face each other and one must move, allowing the enemy king to advance. Section 2.2.1 (page 28) examines the basic opposition, and also considers the more complex case in which it is possible to seize the opposition from the opponent by exploiting the enemy king's confined position. In Section 2.2.2 (page 32) we move on to the distant opposition, in which the kings initially stand further apart. If you don't have the opposition to begin with, you can sometimes gain it by manoeuvring your king in a triangle; this process is called *triangulation*, and is covered in Section 2.2.3 (page 34). This section starts with some basic examples, then moves on to the case of the 'mined' square, and finally considers more difficult positions in which the king manoeuvres are complicated by the presence of spare pawn moves. Reciprocal zugzwangs play a major role in pawn endings, and many positions involving the opposition feature reciprocal zugzwangs. However, reciprocal zugzwang is a more general concept, and many reciprocal zugzwangs don't directly involve the opposition. Section 2.2.4 (page 39) explores such positions, and the examples here show how confusing this concept is even for a player of Kasparov's strength. There is a particular problem with deceptive positions that look as if they should be based on the opposition, but are not, since in this case players are often misled by their ingrained reflexes. Studying this section should serve to warn readers of the possible dangers.

At one time I dismissed the theory of corresponding squares as something of interest only to theoreticians and having little or no practical value. My work on this book has caused me to reconsider this opinion, since I encountered a number of practical examples which could only be solved by using corresponding squares. However, the theoreticians tend to analyse such positions by making patterns of numbers on the chessboard, and this method isn't of much use in over-the-board play. Section 2.2.5 (page 45) examines some real-life examples of corresponding squares and also explains how one can work out such positions in over-the-board play.

Passed pawns are a major asset in pawn endings. Sometimes a passed pawn can't be stopped at all, but even if the enemy king can catch the pawn, the king may be drawn so far out of position that defence is impossible. Passed pawns are sometimes created by penetrating with the king and capturing enemy pawns, but they can also arise more dramatically after a *breakthrough*. This involves sacrificing one or more pawns in order to create a dangerous passed pawn. Section 2.3 (page 56) considers various

possibilities for a breakthrough. Special attention is given to the *square breakthrough*, in which the four pawns are arranged in a square (for example, with white pawns on f3, g4 and h4 and black pawns on g6 and h5, Black plays ...g5 to create a passed h-pawn). This arises frequently in practice, and is often overlooked even by grandmasters (see the examples involving Adams and Nikolić in this section).

King position is an important factor in pawn endings and this is examined in Section 2.4 (page 65). Section 2.4.1 (page 65) shows how a king poorly placed at the edge of the board can prove fatal, while in Section 2.4.2 (page 70) we turn the situation around and look at the positive qualities of a more active king. Players are often surprised to discover that with equal material a more active king can be a decisive advantage all by itself, while a well-placed king can help the defender save the game even if he is a pawn down.

Earlier sections showed how important zugzwang is in king and pawn endings, and how the battle for tempi can decide the whole game. Having a *reserve tempo*, that is a spare pawn move which can be executed at any time, is a great advantage in any zugzwang situation, since even if one is initially on the wrong end of a zugzwang, using the reserve tempo can turn the tables completely. Section 2.5 (page 75) looks at reserve tempi, which can have a surprisingly large impact; for example, in Vlahović-Pikula (page 76) White lost despite his more active king mainly due to Black's two reserve tempi on the queenside.

Section 2.6 (page 79) deals with the common practical situation in which material is equal and all the pawns are on the same side. If both kings are near the pawns, then the result is usually a draw, but it often happens that one king is initially at a distance from the pawns. In this case everything depends on whether the attacker's king can penetrate before the defender's king returns.

It is generally desirable to have an outside passed pawn and, if everything else is equal, such a pawn can prove a decisive advantage. Section 2.7 (page 82) covers outside passed pawns, and Section 2.7.1 (page 82) presents some examples in which the traditional view of the outside passed pawn is upheld. However, one of the intriguing discoveries I made while working on this book is that there are several situations in which an outside passed pawn is much less of an advantage than one might expect, and in some cases confers no advantage at all. Readers who have been brought up on the power of outside passed pawns may be sceptical about this, so Section 2.7.2 (page 85) explores the limitations of outside passed pawns in detail, and lists the various factors that can reduce the pawn's impact. In Section 2.7.3 (page 94) we look at the situation in which one side is a pawn up, but his opponent has an outside passed pawn. This occurs relatively often in practical play, and the key factor is whether the side that is a pawn up can capture the enemy passed pawn and make it back in time to defend the remaining pawns.

Section 2.8 (page 98) considers the impact of a space advantage. This sometimes goes hand-in-hand with the active king position considered earlier, but here the focus is on having the further advanced pawns. If, as often happens, there is a race with the two sides' kings moving to opposite flanks, the side with the pawns that are closest to their queening squares will have a head start when enough pawns have been captured to create a passed pawn.

In Section 2.9 (page 103), the competing advantages of an active king and an outside passed pawn face off. This is another topic inspired by the numerous over-the-board examples I found while researching this book, and it is especially interesting because it is often not clear who has the advantage. This may be regarded as an extension of Section 2.7.2 because it turns out that in many cases it is the active king which carries the day.

Positions with many passed pawns are usually dominated by tactics and place a premium on calculating ability. Some examples are presented in Section 2.10 (page 106). Despite the limited material, surprise moves occur quite often in pawn endings and Section 2.11 (page 108) shows how alertness and the determination to consider unlikely-looking moves can reap rewards. Stalemate is a key idea in pawn

endings and even the simple case of king and pawn vs king often depends on an eventual stalemate. Section 2.12 (page 113) looks at some more complicated stalemating ideas.

Section 2.13 (page 117) is the final section in the pawn endings chapter and deals with the important topic of a transition to a queen ending. In some cases, the key point is that after both sides promote there is an immediate tactical idea, such as mate or a skewer. However, in the more complex cases there is no immediate resolution to the queen ending but just a new phase of the struggle. To decide on the correct plan in the pawn ending, it may be necessary to evaluate a queen ending far in advance, and this is often very tricky, even (or maybe especially) in the case of a ♕+♙ vs ♕ position. It's easy to make mistakes in such situations, and it may be worth spending extra time looking for a way to decide the game in the pawn ending if you are not completely sure that a possible queen ending is winning.

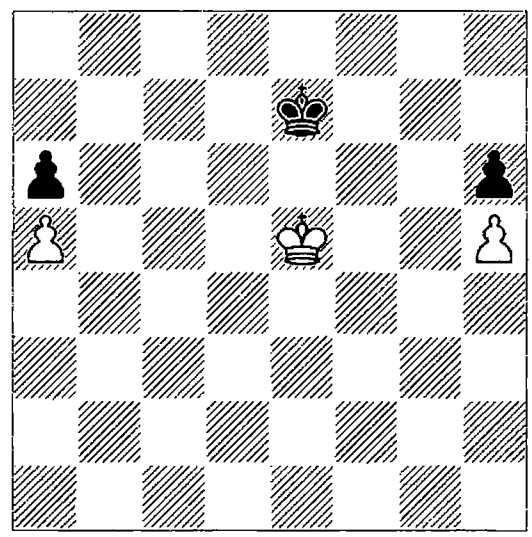
2.2 Zugzwang-Based Ideas

With only kings and pawns on the board, there often aren't very many moves available, especially if the pawn-structure is blocked or almost blocked; indeed, in some positions only the kings can realistically move. In such situations zugzwang is an obvious possibility, so it should come as no surprise that it arises more often in king and pawn endings than in any other type of ending. Zugzwangs can range from simple cases of the opposition to complex networks of corresponding squares, but here we shall focus on those situations which arise in over-the-board play, and leave the more esoteric cases to the theorists.

2.2.1 Opposition

The simplest case of all is the *basic opposition*, in which the two kings face each other along a rank or file with just one square in between; for example, White's king might be on e5 and Black's on e7 (we shall assume that neither side has a spare pawn move). If it is White to move then he cannot advance his king, since Black can simply 'oppose' White's king by meeting ♔d5 with ...♔d7 and ♔f5 with ...♔f7. But if it is Black to move, then the situation is different. Black cannot maintain control of both d6 and f6, so he must allow the white king to advance. The details of what happens next obviously depend on the pawn-structure; for example, if Black has a pawn on g7, covering the f6-square, then he may be able to play ...♔d7 without any ill-effects.

B



Here's an example of the basic opposition. There are two targets, the pawns on a6 and h6, and whichever way Black moves his king, White will be able to attack one or other of the targets. One line is 1...♔f7 2 ♔d6 ♔f6 3 ♔c6 ♔e6 (3...♔g5 4 ♔b6 ♔xh5 5 ♔xa6 ♔g4 6 ♔b6 h5 7 a6 h4 8 a7 and White wins easily) 4 ♔b6 ♔d6 5 ♔xa6 ♔c6 6 ♔a7 ♔c7 7 a6 ♔c8 8 ♔b6 ♔b8 9 ♔c6 ♔a7 10 ♔d6 ♔xa6 11 ♔e6 ♔b6 12 ♔f6 ♔c7 13 ♔g6 ♔d7 14 ♔xh6 ♔e7 15 ♔g7 and White wins by one tempo. If Black starts with 1...♔d7, then play is virtually a mirror-image. The key features of the basic opposition are:

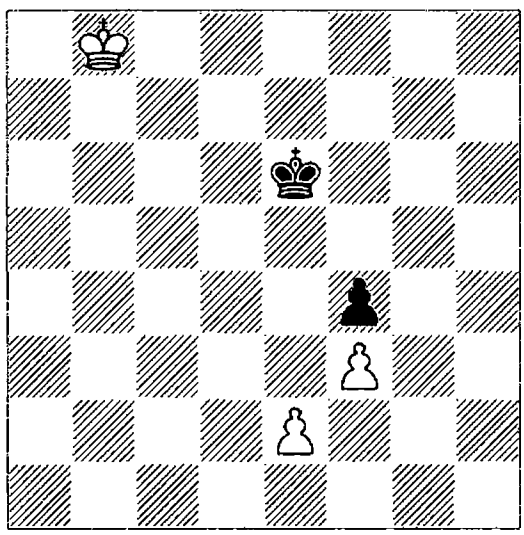
- The two kings face each other with one square in between.
- The advance of the attacker's king has serious consequences for the defender; for example, the attacker's king may be in a position to usher a passed pawn forward, or it may be able to attack a target.

Situations involving the opposition often, but not invariably, involve reciprocal zugzwang. In

the above diagram, if White is to play he can only draw, so this is indeed a reciprocal zugzwang. If the white and black kings are swapped around in the diagram, you can check for yourself that the position is again reciprocal zugzwang. However, the position w♔e6, ♙e5 vs b♔e8 is an example in which with Black to play White wins by making use of the opposition, but it is also a win with White to play, so this is not reciprocal zugzwang.

Although the opposition may appear a fairly basic idea, even strong players can go wrong when dealing with it.

B



Kovacs – Rigo
Hungary 1973

Here White is a pawn ahead, but one pawn is backward, so he can only win if he can approach the f4-pawn with his king. Whether he can achieve this depends on the opposition. In this case, the key idea is the *diagonal opposition*, in which the kings lie on the same diagonal with one empty square between them. The diagonal opposition is usually transformed quickly into a basic opposition.

1...♔d5?

A serious error, allowing White to gain the opposition and make progress with his king in the direction of the f4-pawn. After 1...♔e5? 2 ♔c7! ♔d5 3 ♔d7 Black also loses, since White again seizes the opposition. 1...♔d6! was the correct defence, gaining the diagonal opposition. After 2 ♔c8 ♔c6 3 ♔d8 ♔d6 Black just opposes kings and the white king can never leave the eighth rank, while 2 ♔b7 ♔d7 3 ♔b6 ♔d6 4 ♔b5 ♔d5 is also a draw, as White would even lose were he to play 5 ♔b4?. Here we can see how the diagonal opposition is purely temporary, and after one move becomes a basic opposition.

2 ♔b7!

2 ♔c7? ♔c5 3 ♔d7 ♔d5 is of course a draw.

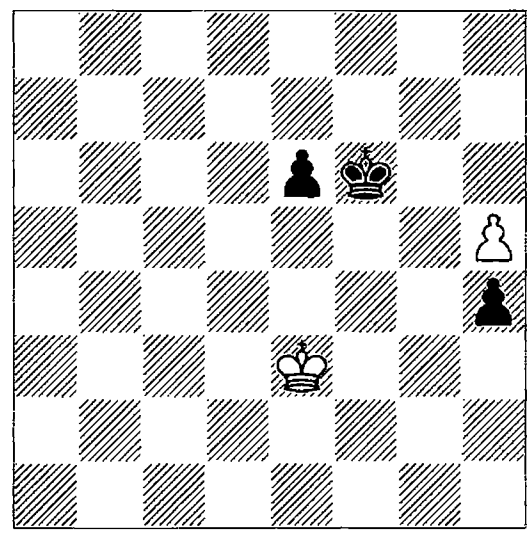
2...♔d6

There is nothing Black can do to prevent White's king from making its way to attack the f4-pawn; for example, 2...♔c5 3 ♔c7 ♔d5 4 ♔d7 ♔e5 5 ♔e7 ♔f5 6 ♔d6 or 2...♔d4 3 ♔c6 ♔e3 4 ♔d5 ♔xe2 5 ♔e4 and in both cases the f4-pawn falls.

3 ♔b6 ♔d5 4 ♔b5 ♔d4 5 ♔c6 ♔e5 6 ♔c5 1-0

Most players believe they understand the principle of the opposition, but applying it in practice is less simple when the position doesn't fit one of the familiar patterns. In the following example, White rose to the challenge and drew what looked like an awkward position.

W



Ju. Horvath – S. Horvath
Hungary 1988

1 ♔f4

The only move as Black was threatening 1...♔g5.

1...h3

Otherwise White draws by 2 ♔g4.

2 ♔g3

White could also have drawn by 2 ♔f3 ♔g5 3 ♔g3 ♔h6 4 ♔h2, with play similar to the game.

2...♔g5

The key moment. Now the obvious 3 ♔xh3? ♔xh5 4 ♔g3 ♔g5 5 ♔f3 ♔f5 6 ♔e3 ♔e5 fails because Black has the opposition and can advance his king, with a winning position. In order to gain the opposition, White must be prepared to meet ...♔xh5 by ♔xh3.

3 ♔h2!

Hence this move, whereby White sidesteps the h3-pawn for the moment.

3...♔h6!?

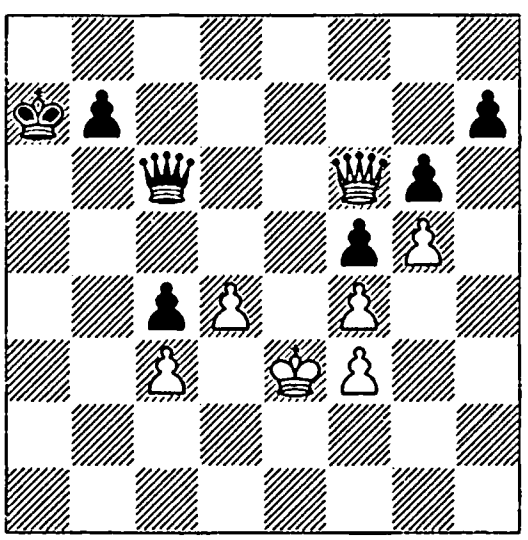
Black does likewise, hoping to trick White into making a mistake. 3...♔xh5 4 ♔xh3 and 3...e5 4 ♔xh3 ♔xh5 5 ♔g3 also lead to a draw.

4 ♔g3! ½-½

White finds the correct move, and Black submits to a draw.

In some situations, it is possible to steal the opposition from the opponent. This can happen if the defender's king is restricted by the pawn-structure, and cannot manoeuvre freely.

W



Wade – Kadiri
Siegen Olympiad 1970

White clearly has an edge, but he is unlikely to win a queen ending, so the big question is whether he can win after a queen exchange.

1 ♕xc6!

A well-calculated decision; the winning process is instructive.

1...bxc6 2 d5

The logical follow-up to the previous move as anything else allows Black to draw easily.

2...c5

2...cxd5 3 ♔d4 is hopeless for Black, as White soon wins the d- and c-pawns, but by controlling d4 Black prevents White's king from advancing in the centre, and cuts the d5-pawn off from support.

3 ♔d2

White's king must now take the long way round.

3...♔b7

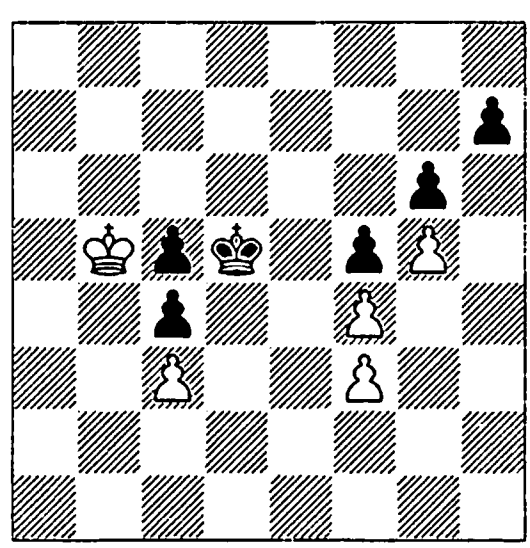
Black will have to capture the d-pawn sooner or later; for example, 3...♔b6 4 ♔c2 ♔b5 5 ♔b2 ♔a5 6 ♔a3 ♔b5 7 d6 ♔c6 8 ♔a4 ♔xd6 9 ♔b5 transposes to the game.

4 ♔c2 ♔c7 5 ♔b2 ♔d6 6 ♔a3 ♔xd5 7 ♔a4 ♔d6

Or 7...♔c6 8 ♔a5 ♔d5 9 ♔b5 ♔d6 10 ♔b6! transposing to the game, but not 10 ♔xc4? ♔c6 with a draw.

8 ♔b5 ♔d5 *(D)*

W



At first sight White cannot get anywhere because Black has the opposition so that if White plays 9 ♔b6, Black replies 9...♔d6 and continues to oppose kings. However, holding the opposition is only of value if your king has enough space to keep it. Here Black's king does not have access to the e5-square, a factor White exploits with his next move.

9 ♔a5!

Black cannot move to e5, but after any other move White can seize the opposition himself.

9...♔e6

This offers the most resistance. After 9...♔c6 10 ♔a6 ♔c7 11 ♔b5 ♔d6 12 ♔b6 or 9...♔d6 10 ♔b6 Black loses more quickly.

10 ♔a6! ♔d6

After 10...♔e7 White wins by 11 ♔b5! ♔d6 12 ♔b6, as in the game.

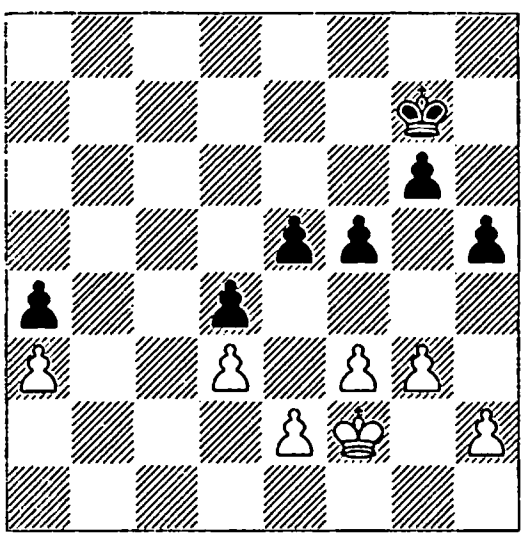
11 ♔b6 ♔d5 12 ♔c7

Now Black has to open the door for White's king to move in and take both Black's c-pawns.

12...♔e6 13 ♔c6 ♔e7 14 ♔xc5 ♔d7 15 ♔xc4 ♔c6 16 ♔d4 1-0

In some cases, having the opposition can even compensate for being a pawn down.

W



M. Gurevich – Nedilko
USSR 1982

It's easy to make the false assumption that a king and pawn ending with an extra pawn and pawns on both sides of the board is automatically won. Although this is usually the case, there are exceptions, especially if the attacker has a crippled pawn-majority. In this example, the strong player M.Gurevich, annotating his own game in *Informator 34*, overlooked a surprising but logical drawing resource for his opponent.

1 f4

'Winning', according to Gurevich, but Black can still draw. White's advantage lies in the possibility of crippling Black's kingside pawn-majority by playing h4 at some moment. Then the exchange of White's f-pawn for Black's e-pawn will leave White with the chance to make a passed pawn in the centre by playing e3, while Black will not be able to make a compensating passed pawn on the kingside. It is ironic that the defence Black misses on move three involves turning the tables on White, and crippling his kingside pawns.

1...♔f6

Enough for a draw, but Black could also have held on by 1...exf4 2 gxf4, and now:

1) 2...♔f6? loses to 3 h4 and Black's pawn-majority is crippled, although some care is still needed: 3...♔e6 4 e3 (4 e4? ♔e7 is a draw as White's king cannot penetrate) 4...dxe3+ 5 ♔xe3 ♔d5 6 ♔e2 ♔c5 (after 6...♔d4 7 ♔d2 Black loses more quickly) 7 ♔d1! (not 7 ♔d2? ♔d4 and White has no good move) 7...♔d5 8 ♔c2 (White is moving around the 'mined' square d2; this is a topic we shall return to in Section 2.2.3 on page 34) 8...♔d4 9 ♔d2 ♔c5 10 ♔c3 ♔d5 11 d4 ♔e4 12 ♔c4 ♔xf4 13 d5 ♔e5 14 ♔c5 f4 15 d6 f3 (15...♔e6 16 ♔c6 doesn't change the situation) 16 d7 f2 17 d8♕ f1♕ 18 ♕e8+ and Black loses his queen.

2) 2...h4! is a simple drawing line, preventing White from occupying h4 with his own pawn. After 3 e3 dxe3+ 4 ♔xe3 ♔f6 5 d4 g5 6 fxg5+ ♔xg5 7 d5 ♔f6 8 ♔f4 h3 9 ♔g3 ♔e5 10 ♔xh3 ♔xd5 11 ♔g3 ♔e4 12 ♔f2 ♔f4 13 h3 ♔g5 it's a clear draw.

2 h4

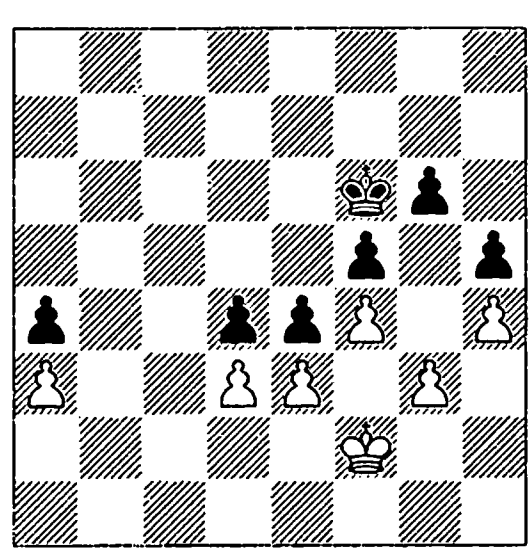
White must prevent ...g5 if he is to have any chance of winning.

2...e4!

The only move. 2...♔e6? loses to 3 ♔f3 ♔d5 4 fxe5 ♔xe5 5 e3 ♔d5 6 ♔f4 dxe3 7 ♔xe3 ♔c5 8 ♔f4 ♔d4 9 ♔g5 ♔xd3 10 ♔xg6 ♔c3 11 ♔xh5 while 2...exf4? 3 gxf4 transposes to line 1 in the note to Black's first move.

3 e3 *(D)*

B



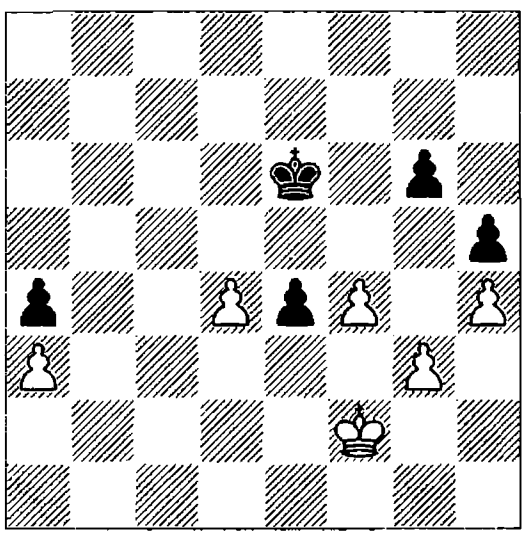
Otherwise Black plays ...e3, sealing the position shut.

3...♔e7?

Black resigns himself to defeat just when he could have secured a draw by 3...dxe3+! (not 3...♔e6? losing to 4 exd4 ♔d6 5 dxe4 fxe4 6 g4! hxg4 7 f5! and Black cannot stop the two passed pawns) 4 ♔xe3 ♔e7! (after 4...exd3? 5 ♔xd3 Black loses as he is too slow to attack the white pawns with his king) 5 dxe4 (5 ♔d4 ♔d7 doesn't help since White must take on e4 sooner or later) 5...fxe4 6 ♔xe4 ♔e6, when Black gains the opposition and draws, despite White's extra pawn. For example, after 7 ♔d4 ♔f5 8 ♔e3 ♔g4 9 ♔f2 ♔f5 10 ♔f3 ♔f6! 11 ♔e3 (or 11 ♔e4 ♔e6) 11...♔f5 White cannot make progress. Thanks to the missing f5-pawn, Black's king has easy access to attack the g3-pawn, and this prevents White from running to take the a4-pawn with his king.

4 exd4 ♔e6 5 dxe4 fxe4 *(D)*

W



Black's hopes of drawing are dashed because White's kingside majority is not as crippled as it looks. By means of a breakthrough, White can create a second passed pawn, which proves too much for Black's king.

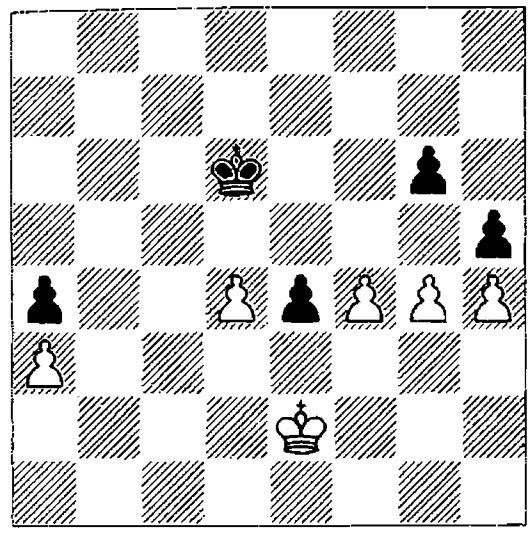
6 ♔e2!

This waiting move forces Black's king one square further away from the kingside (because he must be ready to meet ♔e3 by ...♔d5).

6...♔d6 7 g4! *(D)*

Black's king is no longer controlling f5, so White can create a passed h-pawn by sacrificing two pawns.

B



7...hxg4 8 f5 gxf5 9 h5 g3

Black's pawns are one tempo too slow.

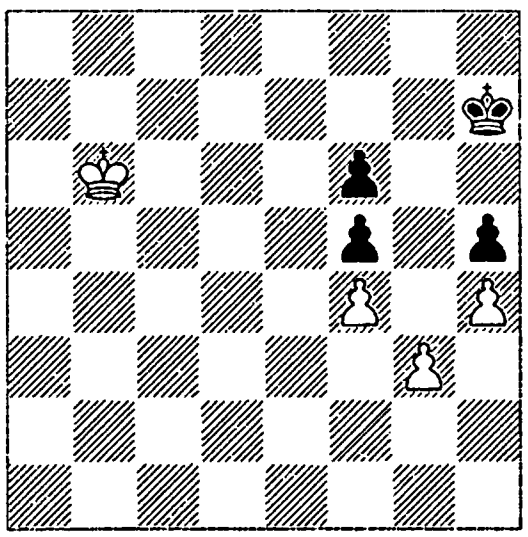
10 h6 f4 11 h7 f3+ 12 ♔f1 g2+ 13 ♔g1 1-0

Summary:

- In the basic opposition, the kings face each other horizontally or vertically, with just one square between the kings. Then the side to move must allow the enemy king to advance.
- Even if initially you don't have the opposition, you can sometimes gain it by king manoeuvres. This can only be forced if your king has more manoeuvring space than your opponent's.
- You can sometimes defend a pawn-down position with pawns on both sides of the board, provided the enemy pawn-majority is crippled and you have the opposition.

2.2.2 Distant Opposition

The opposition can also play a role if the kings are further apart. When the kings are on the same rank or file, and have an odd number of empty squares between them, then the side to move can be in the same awkward situation as with the normal opposition. If you don't like counting squares, an equivalent formulation is that the two kings should stand on squares of the same colour. The main problem in cases of the distant opposition is manoeuvring the king nearer to the enemy king without losing the opposition. Eventually the distant opposition is converted into a basic opposition.



Abreu – Nogueiras
Cuban Ch, Las Tunas 2001

The distant opposition can prove difficult even for grandmasters. The diagram position is winning for White because he can seize the distant opposition. Then he is able to manoeuvre his king closer and closer to the pawns, all the time retaining the opposition. Ultimately, White is aiming for a position with ♔e7 vs ♔g7, when after the forced ...♔g6 White plays ♔f8 and wins Black's pawns one after the other.

1 ♔b5?

A mistake which should have cost White half a point. 1 ♔b7! was the only winning move, securing the distant opposition (the two kings occupy squares of the same colour), and now:

1) 1...♔h8 2 ♔c6!. This move is typical; in order to approach, White can't just mimic the movements of Black's king, since then he cannot make progress. Therefore, at some point White must temporarily break away from the dictates of the opposition, provided he is sure that he can regain it later. Such a move is called a *by-pass*. A by-pass is possible if it leaves the kings separated by two ranks, since if Black moves his king back to the rank between the kings, White can occupy the same rank while choosing the correct square to regain the opposition; here 2...♔g7 3 ♔c7 and 2...♔h7 3 ♔d7 demonstrate how this works. If Black refuses to return to the second rank with 2...♔g8, then White wins by 3 ♔d6! ♔f7 (sooner or later Black has to move to the second rank) 4 ♔d7 ♔g7 5 ♔e7 ♔g6 6 ♔f8 and again the pawns fall. Choosing when to play the by-pass sometimes requires a little thought.

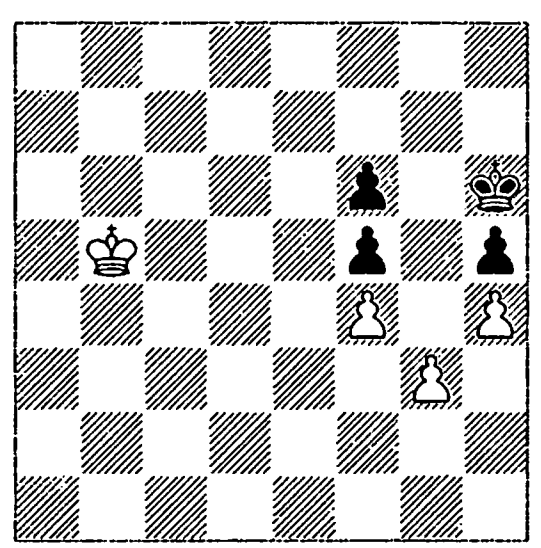
2) 1...♔h6 2 ♔c8! is a symmetrical variation which also features a by-pass: 2...♔g6 3 ♔d8! ♔h6 4 ♔e8! ♔g7 5 ♔e7 ♔g6 6 ♔f8 leads to the same win.

3) 1...♔g8 2 ♔c8 ♔g7 3 ♔c7! ♔g8 4 ♔d6! (the correct moment for the by-pass; when Black moves away from the 'middle' rank, White goes in the opposite direction) 4...♔f7 5 ♔d7 ♔g7 6 ♔e7 ♔g6 7 ♔f8 and White wins.

4) 1...♔g6 2 ♔c6 transposes into the game.

1...♔h6? *(D)*

The wrong choice, which allows White to win by repeating the position. 1...♔g7! would have drawn, as now Black can wait until White's king moves to the sixth rank, and then occupy g6 or h6 accordingly: 2 ♔b6 (2 ♔c5 ♔h7 draws; Black continues to wait on g7 and h7 until White advances his king) 2...♔h6 3 ♔c6 ♔g6 4 ♔d6 ♔h6 5 ♔d7 ♔h7 6 ♔e7 ♔g7 and Black can always maintain the opposition.



2 ♔c5?

Giving Black an opportunity to correct his error. White could have won by 2 ♔b6! ♔h7 3 ♔b7 as in the note to White's first move.

2...♔g6?

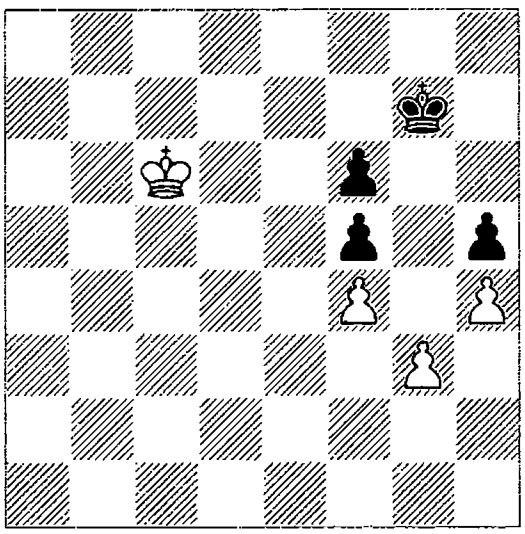
Black fails to understand the logic of the position and gives White a third winning possibility, which he takes. Either 2...♔g7 or 2...♔h7 would have drawn; as explained above, Black can just oscillate between g7 and h7, meeting ♔c6/e6 with ...♔g6 and ♔b6/d6 with ...♔h6.

3 ♔c6!

Now White is winning and he makes no further mistake.

3...♔g7 *(D)*

W



4 ♔c7! ♔g8

4...♔g6 5 ♔d8 is similar.

5 ♔d6!

Time for the by-pass. White will regain the opposition when both kings are on the seventh rank.

5...♔h7

5...♔g7 6 ♔e7 and 5...♔f7 6 ♔d7 are also winning for White.

6 ♔d7 ♔h6 7 ♔e8 ♔g7 8 ♔e7 1-0

Summary:

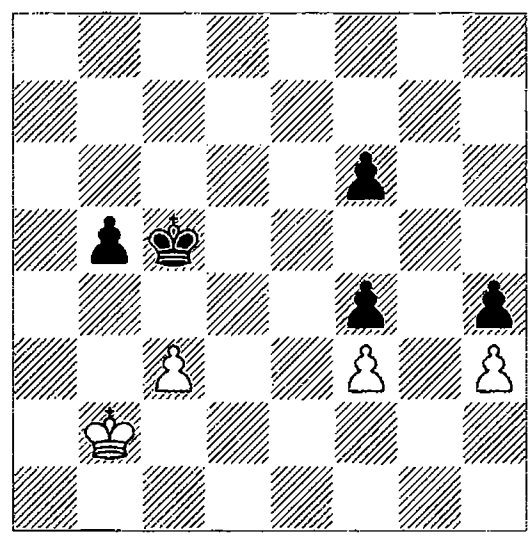
- The distant opposition arises when the two kings face each other along a file or rank, with an odd number of squares in between.
- In order to make progress, the side with the opposition must use a by-pass. The correct moment for this arises when the enemy king leaves the line joining the kings, after which the attacker executes the by-pass by also leaving the line, but **in the opposite direction** to the enemy king.

2.2.3 Triangulation

Triangulation is one of those chess terms that isn't very clearly defined. It refers to a manoeuvre by a king in which it loses a tempo by moving along the sides of a triangle and is used in two slightly different situations. In the first, the triangle is not complete and the king moves only along two sides of the triangle. We already saw this type of manoeuvre in Wade-Kadiri at White's 9th move (see page 30). There, the immediate ♔a6 could be met by ...♔e6, but by playing the king to a5 and only then to a6, White was able to lose a tempo and gain the opposition. The manoeuvre ♔b5-a5-a6 formed two sides of a triangle, and this type of tempo-losing manoeuvre is sometimes called 'triangulation' even though the triangle isn't actually completed.

In the second type of triangulation the triangle is actually completed. In these cases the attacker's king returns to its initial square after three moves; for some reason the defender's king is not able to match this manoeuvre, usually because it is forced to oscillate between just two squares. The net effect is to lose a tempo. Here's an example.

B



Veselovsky – Firt
Rymarov 1999

The win is not too complicated, but the puzzle defeated Black in the game, which continued **1...b4? 2 ♔b3 bxc3 3 ♔xc3** and a draw was agreed (½-½), since after 3...f5 4 ♔d3 ♔d5 5 ♔c3 Black cannot make progress. Although Black has the opposition, it is of no value because e4 is covered by an enemy pawn and therefore his king cannot penetrate.

Veselovsky later pointed out that the correct plan for Black was to penetrate with his king to White's first rank and get behind the white pawns. This could have been achieved by a neat triangulation manoeuvre.

1...♔c4! 2 ♔c2 f5!

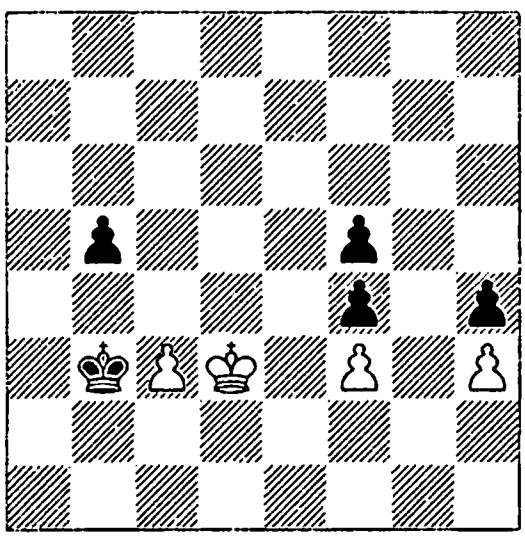
It's again wrong to play 2...b4? because White draws after 3 cxb4 ♔xb4 4 ♔d3.

3 ♔d2

After 3 ♔b2, 3...b4 really does win because 4 cxb4 ♔xb4 5 ♔c2 ♔c4 6 ♔d2 ♔d4 secures the opposition when Black's king *can* penetrate.

3...♔b3 4 ♔d3 *(D)*

B



This is the key position. Black can win provided he transfers the move to White, thereby gaining the opposition; it often happens that this can be achieved by playing the king to a square where the corresponding move by the enemy king is impossible. Here the f4-pawn covers e3, which is therefore inaccessible; if Black plays his king to a3, then White cannot move his king to the analogous square, and this enables Black to seize the opposition.

4...♔a3!

4...♔a2? 5 ♔c2 is actually a position of reciprocal zugzwang; it looks as if Black can still triangulate by 5...♔a3, but then White can escape by the surprising 6 c4! b4 7 ♔b1 ♔a4 8 ♔b2 b3 9 c5. In many cases, it doesn't matter which direction the king chooses to move round the triangle, but here it is important: anti-clockwise wins, but clockwise only draws.

5 ♔e2

After 5 ♔c2 ♔a2 White is to play in the reciprocal zugzwang and he loses after 6 c4 (6 ♔d3 transposes to the main line) 6...b4 7 c5 b3+.

5...♔a2

Black has seized the opposition and soon penetrates with his king to c1.

6 ♔d3 ♔b3

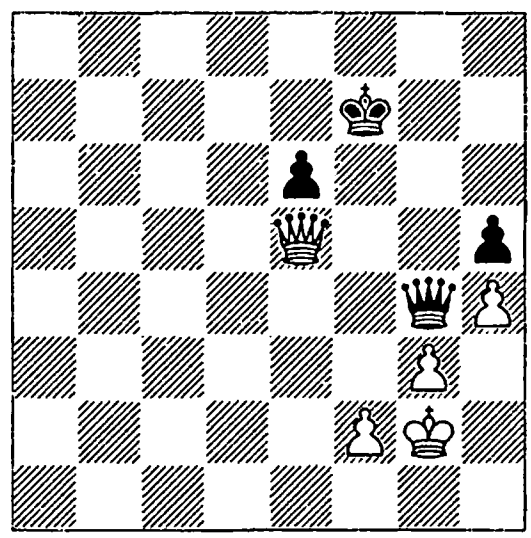
The triangle is complete and the move has been transferred to White.

7 ♔d2 ♔b2 8 ♔d3 ♔c1

and Black wins.

In some situations the triangulation is merely a by-product of another type of king manoeuvre. This arises when the king needs to move to a particular destination, but must avoid a 'mined' square somewhere along the route. Then the king must tiptoe around the mined square in order to reach its target.

W



Furman – Gerusel
Bad Lauterberg 1977

White is a pawn up, but with queens on the board the win is by no means certain. However, White can immediately force the exchange of queens by 1 ♕f4+, albeit at the cost of damaging his pawn-structure. If the resulting king and pawn ending is a win, this is the clearest route to victory.

1 ♕f4+!

The correct decision; White accurately calculates the consequences of exchanging queens.

1...♕xf4 2 gxf4 ♔g6

2...♔f6 3 f3 is similar.

3 f3!

The only move by which White can make progress. 3 ♔g3?! ♔f6! just costs White time, since he can only win by backtracking with 4 ♔g2 ♔g6 5 f3, while 3 ♔f3? ♔f5 is an immediate draw.

3...♔f5 4 ♔g3 e5

Black plays to exchange pawns, for otherwise White wins by playing his king to the other side of the f-pawns; for example, 4...♔f6 5 ♔f2 ♔g6 6 ♔e2 (not, of course, 6 ♔e3? ♔f5 and now White has to find 7 ♔e2! even to draw) 6...♔f6 7 ♔d3 ♔f5 8 ♔e3 ♔g6 9 ♔e4 ♔f6 10 f5! exf5+ 11 ♔d5 and sooner or later Black will lose both his pawns.

5 fxe5 ♔xe5 6 ♔f2!

6 ♔g2?! wastes time, because after 6...♔d4 7 ♔f2 ♔d3 White cannot play 8 f4? (8 ♔g2, reversing course, still wins) due to 8...♔e4 9 ♔g3 ♔d5! 10 ♔f3 ♔d4 and White cannot make progress.

6...♔f4 *(D)*

6...♔d4 7 ♔e2 ♔d5 8 ♔e3 ♔e5 9 f4+ allows White to win more easily.

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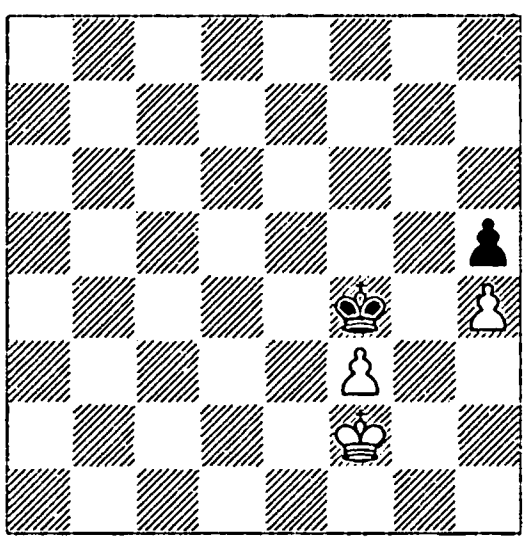

This is the key position. White would like to advance his king to e3 which, as we shall see in the game, is sufficient to win. The problem is that 7 ♔e2? ♔g3 is a draw, so White cannot achieve his aim directly. The key idea is to transfer the move to Black and the first step is forced, since everything else leads to an immediate draw.

7 ♔g2 ♔e5

White wins after 7...♔e3 8 ♔g3 ♔d4 9 ♔f4, while 7...♔f5 8 ♔f1 is similar to the game.

8 ♔f1!

White wishes to play his king to the left of the f-pawns, but he must sidestep the 'mined' square f2, which would allow Black to reply ...♔f4, repeating the above diagram position. Once the white king reaches e2, Black will be in trouble because e4 is out of bounds, so he cannot oppose White's king.

8...♔d5

8...♔f4 is met by 9 ♔f2, completing the triangle, and for the same reason Black can never play his king to f4 while White's king is in touch with the f2-square.

9 ♔e2 ♔d4 10 ♔d2

Now Black has to start retreating.

10...♔e5 11 ♔e3 ♔f5 12 f4! ♔g4

12...♔f6 13 ♔e4 ♔e6 14 f5+ ♔f7 15 ♔e5 is a simple win for White, so Black plays to attack the h4-pawn.

13 ♔e4 ♔xh4 14 ♔f3! 1-0

As White wins easily after 14...♔h3 15 f5 h4 16 f6.

We have already seen that the play can be quite tricky even when only the kings can move, but if there are also mobile pawns then the complexity rises another notch. It may be very difficult to analyse such positions on an 'if I move here, then he goes there...' basis, using the traditional 'tree of variations' approach. In practical play, such methods can easily lead to hopeless confusion as a whole series of similar positions gets muddled together in one's head. Instead, it is much better to identify the key zugzwang position, which can then serve as a compass to help navigate through the thickets of variations.

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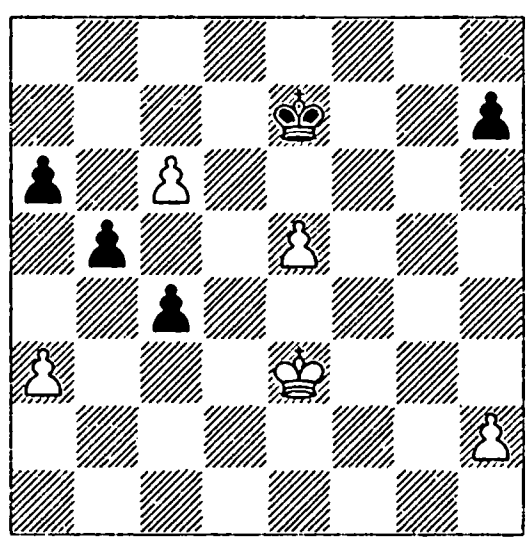

Taborov – V. Vovk
Kiev 1993

White has only one move to win, and in order to find it you have to understand that the

position with White's king on d4 and Black's pawn on a5 (all other pieces as in the diagram) is reciprocal zugzwang. The analysis justifying this claim may be found in the first two notes below. Like most annotations, these are written sequentially, but it is important to recognize that over-the-board thinking processes are often not like this. Instead, players often seek out target positions and then work out how to arrive at them.

1 ♔e4!

Once we are aware of the ♔d4 vs ♙a5 reciprocal zugzwang, this odd-looking move makes much more sense. 1 ♔d4? is wrong, as after 1...a5! (not 1...♔e6? 2 ♔c5 c3 3 c7 ♔d7 4 ♔b6 c2 5 e6+ ♔c8 6 e7 and White wins) the reciprocal zugzwang arises with White to play. To see why White is in zugzwang here, we first of all ignore the kingside pawns since both sides have the same number of tempi there. Otherwise, the only reasonable moves are: 2 a4 b4 3 ♔xc4 ♔e6 4 ♔d4 ♔e7 and White cannot make progress; 2 ♔c5? c3 3 c7 c2 and Black's king is on e7, so White doesn't promote with check and therefore loses; and finally 2 ♔c3 ♔e6 (not 2...♔d8? 3 e6) 3 ♔d4 ♔e7 and White cannot achieve anything (for example, 4 ♔e4 b4 5 axb4 axb4 6 ♔d4 c3 7 ♔d3 is a draw). The move played triangulates with the white king so as to reach the key reciprocal zugzwang with Black to play.

1...♔e6

After 1...a5 2 ♔d4! Black is in zugzwang: 2...♔e6 3 ♔c5 c3 4 c7 and White wins because he threatens to promote with check, while 2...a4 3 ♔c3 ♔e6 4 ♔b4 ♔e7 5 ♔xb5 c3 6 c7 ♔d7 7 ♔b6 c2 8 e6+ also wins for White. Nevertheless, the question remains as to how White wins if Black steadfastly refuses to play ...a5 and just keeps moving his king between e6 and e7.

2 ♔d4

Threatening to win with ♔c5, so the reply is forced.

2...♔e7 3 ♔c3 *(D)*

The key moment. White now threatens to win by playing ♔b4-a5.

3...♔e6

Black can only prevent the king's advance by 3...a5, but then the switchback 4 ♔d4! again

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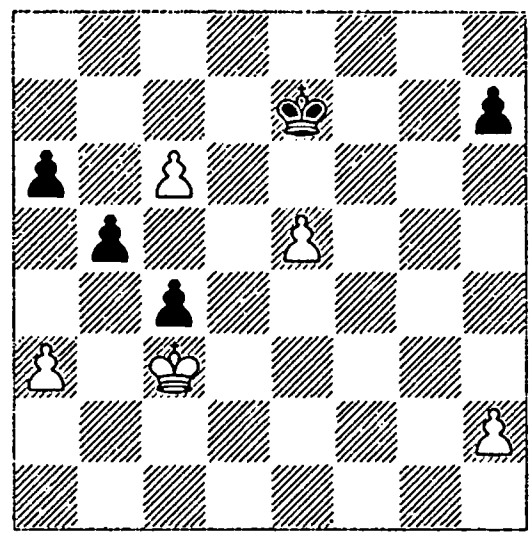


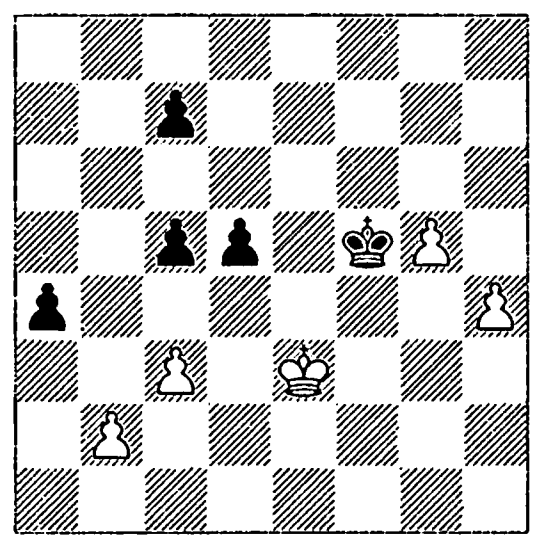
leads to the reciprocal zugzwang with Black to play.

4 ♔b4! ♔e7 5 ♔a5 c3 6 c7 ♔d7 7 ♔b6 c2 8 e6+ 1-0

White wins after 8...♔c8 9 e7.

In exceptional cases, the attacker's king may have to undertake extensive manoeuvres in order to achieve a decisive triangulation.

W



Om. Garcia – Otero
Cuba 2002

Material is equal, but White's connected passed pawns give him the advantage. The problem is that Black can also create a passed pawn, which makes it awkward for White's king to support the kingside pawns. In some situations, White can move out of the square of Black's d-pawn, allowing it to promote, provided that the kingside pawns are fast enough. The curious feature of this position is that in

order to support the kingside pawns, the king must first journey to a1! White deserves great credit for finding this unusual manoeuvre over the board.

1 c4!

White must prevent Black from gaining more space on the queenside, so 1 ♔d2? is wrong, as after 1...c4 followed by ...c5, Black will soon be able to play ...d4, and with Black's pawns so far forward White will never be able to use his king to support the kingside pawns.

1...c6

Black does not want to play ...d4 because he then forfeits the option of making a passed pawn by ...dxc4 followed by ...a3 or ...c3. Thus 1...d4+ allows White to win more directly by 2 ♔f3 ♔g6 (2...c6 3 ♔g3 doesn't help Black) 3 ♔g4 ♔g7 4 h5 ♔f7 5 g6+ ♔f6 6 ♔f4 c6 7 ♔g4 ♔g7 (having driven Black's king back as far as possible while keeping his king within the square of Black's d-pawn, White now allows the d-pawn to promote in order to force his own passed pawns home) 8 ♔g5! d3 9 h6+ ♔g8 10 ♔f6 d2 11 h7+ ♔h8 12 ♔f7 d1♕ 13 g7+ ♔xh7 14 g8♕+ ♔h6 15 ♕g6#.

The winning idea is for White first of all to force Black to play ...d4 and then move his king to the kingside in order to win as in the above line. In order to persuade Black to commit his d-pawn, White must manoeuvre his king so as to attack the a4-pawn.

2 ♔d2

When Black's pawn is still on d5, White cannot move his king to the kingside; for example, 2 ♔f3?? loses to 2...dxc4 3 ♔e3 c3.

2...♔g6 3 ♔c1!

The march towards a4 continues.

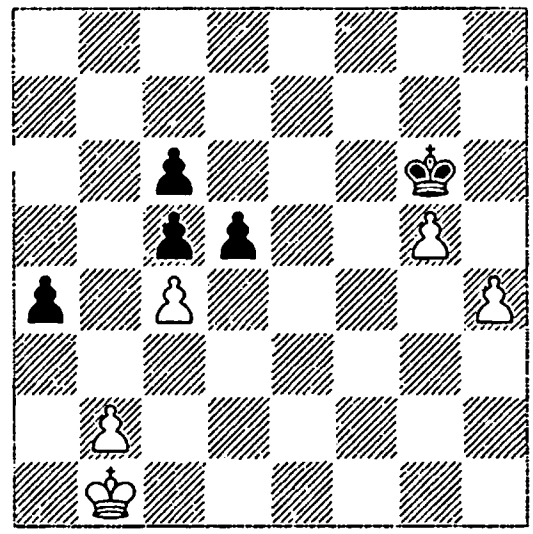
3...♔f5 4 ♔b1 ♔g6 *(D)*

A key moment. White is aiming for the a4-pawn, but is it better to play ♔a2 at once, or to triangulate via a1?

5 ♔a1!

This move wins without allowing Black to 'escape' to a queen ending, albeit one that is lost. After 5 ♔a2?! ♔f5 6 b3 (not 6 ♔a3? d4 7 ♔a2 ♔e4 8 g6 d3 9 g7 d2 10 g8♕ d1♕ 11 ♕g3 ♔f5 and this queen ending is a draw) 6...d4 (or 6...axb3+ 7 ♔xb3 ♔g6 8 ♔c3 ♔f5 9 ♔d3 ♔g6 10 ♔e3 ♔f5 11 ♔f3 and White wins much as in the note to Black's first move) 7 ♔b2 ♔f4 8 g6 d3 9 g7 a3+ 10 ♔a2 d2 11 g8♕ d1♕ 12 ♕g5+ ♔e4 13 ♕xc5 ♕d2+ 14 ♔xa3 ♕c1+ 15 ♔a4 ♕a1+ 16 ♕a3 White must be winning with his two extra pawns, but it would still require some work.

W



5...♔f5 6 ♔a2 d4

Black commits his d-pawn in order to save his pawn on a4. The alternative is 6...♔g6, but then White wins by 7 cxd5 cxd5 8 ♔a3 d4 9 ♔xa4 ♔f5 10 ♔b3 ♔e4 11 ♔c2 and the d-pawn is blocked.

7 ♔b1!

Completing the triangle. Now that Black has made a concession in the centre, White goes into reverse gear and plays his king to the kingside, winning as in the note to Black's first move.

7...♔g6 8 ♔c2 ♔f5 9 ♔d3 ♔g6 10 ♔e4 ♔f7 11 ♔f4 ♔g6 12 ♔g4 ♔h7 13 h5 ♔g7 14 g6 ♔h6 15 ♔f4 ♔g7 16 ♔g5! d3 17 h6+ ♔h8 18 ♔f6 d2 19 ♔f7 1-0

It's mate in three more moves.

Summary:

- Triangulation is a way to lose a tempo by moving the king along the sides of a triangle, thus arriving at a particular square one move more slowly than via a direct route. In some cases the triangle is completed, while in others only two sides are used.
- Situations in which the attacker's king has to manoeuvre around a 'mined' square often lead to triangulation.
- If there are mobile pawns present, the analysis can become very complicated. In such a

case it is usually better to try to identify key target positions rather than use the traditional 'tree of analysis' approach.

2.2.4 Reciprocal Zugzwang

Positions of reciprocal zugzwang arise frequently in king and pawn endings; indeed, many positions involving the opposition are reciprocal zugzwang. However, there are also many cases which are more obscure and in which the play involves a degree of subtlety. Such cases regularly trip up players of all standards, including grandmasters, and even positions with just two pawns against one have proved unexpectedly baffling. Once again it is usually better to try to identify key positions rather than analyse a forest of variations.

Here are a couple of examples.

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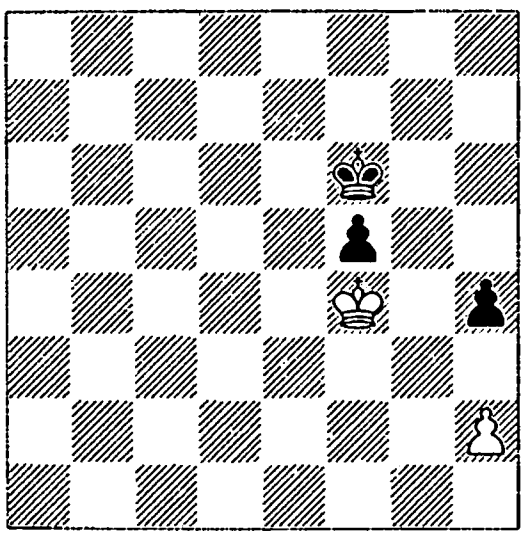


Smerdon – Miezis
Tilburg 2006

White has three legal moves, but only one draws. Which one?

1 h3?

This is one of the two losing moves. In general, it's a mistake to push the h-pawn in a position like this, since White's drawing chances are best when the pawn is on the second rank; advancing the pawn weakens it and makes it easier for the black king to approach the pawn.

1 ♔f3? is also wrong because after 1...♔g5! (1...♔e5? 2 ♔e3 f4+ 3 ♔f2 transposes to the 1 ♔e3! analysis) White is to play in a reciprocal zugzwang. He must now either allow the enemy king to advance or play h3 which, as noted above, is generally undesirable. Black wins after 2 ♔e2 (2 h3 ♔f6 3 ♔f4 ♔e6 transposes to the note after the draw agreement) 2...♔g4! (gaining the opposition) 3 ♔f2 ♔f4 4 ♔e2 ♔e4 (now White has to give way and allow the enemy king to advance) 5 ♔f2 ♔d3! 6 ♔f3 (6 h3 ♔e4 wins for Black as in the game) 6...h3! 7 ♔f2 (7 ♔f4 ♔e2 8 ♔xf5 ♔f3 and Black wins) 7...♔d2! 8 ♔f3 (8 ♔f1 ♔e3 9 ♔e1 f4 10 ♔f1 ♔f3 is also decisive) 8...♔e1 9 ♔g3 ♔e2 10 ♔xh3 f4 and the f-pawn promotes.

Once we suspect that the position with ♔f3 vs ♔g5 is reciprocal zugzwang, it's much easier to find the correct move. 1 ♔e3! is the only way to draw (White found this defence in the earlier game Tarjan-Larsen, Riga Interzonal 1979); then after 1...♔g5 2 ♔f3 it is Black to play in the reciprocal zugzwang and after 2...f4 3 ♔e2 ♔g4 4 ♔f2 ♔h3 5 ♔g1 f3 White can draw by either 6 ♔f2 or 6 ♔h1. The other possibility is 1...♔e5, but then 2 ♔f3 f4 3 ♔f2 (3 ♔e2 is also good) 3...♔e4 4 ♔e2 f3+ 5 ♔f2 ♔f4 6 ♔e1 ♔e3 7 ♔f1 leads to a draw after 7...f2 8 h3 or 7...h3 8 ♔e1.

1...♔g6?!

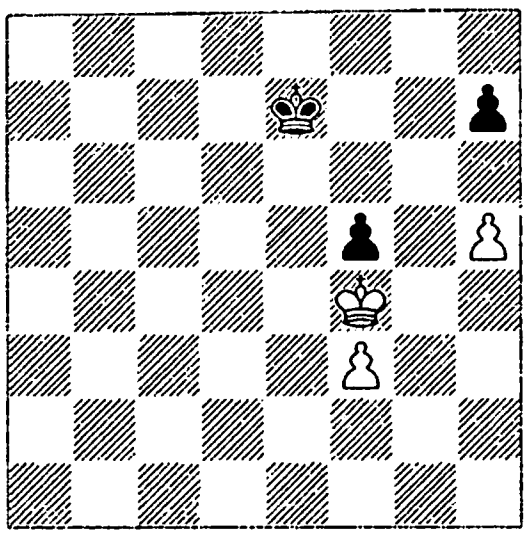
This loses time as now Black must repeat the position in order to secure victory.

½-½

The game was agreed drawn at this point even though Black can still win: 2 ♔e3 ♔f6 3 ♔f4 ♔e6 (Black could have reached this position more quickly by 1...♔e6!) 4 ♔f3 (4 ♔g5 ♔e5 5 ♔xh4 f4 6 ♔g4 ♔e4 7 h4 f3 8 ♔g3 ♔e3 also wins for Black) 4...♔e5 5 ♔e3 f4+ 6 ♔f3 ♔f5 7 ♔f2 ♔e4 8 ♔e2 f3+ 9 ♔f1 reaching a textbook position (see, for example, *Understanding Chess Endgames*, position 14a). Black wins by triangulating with his king around the f4-square: 9...♔e5 10 ♔e1 ♔f5 11 ♔f1 (White's moves are forced as ♔f2 is always answered by ...♔f4) 11...♔e4 12 ♔f2 ♔f4 followed by ...♔g3, winning.

The following example is similar, but with the difference that at the moment the f-pawn is only on the third rank. If White pushes this pawn, then play is likely to transpose to the previous position.

W



Azmaiparashvili – Eolian
USSR Spartakiad, Moscow 1979

This is an instructive example of how even very strong players can go totally wrong in an apparently simple pawn ending, the finesses of which confused the two players and annotator Gufeld.

1 ♔g5?

White's subtlety is misguided. The position with ♔f5 vs ♔e7 is actually reciprocal zugzwang, and by playing his king to g5 first he gives Black the chance to arrive at the critical position with White to move. The winning line was 1 ♔xf5! ♔f7 2 f4! (a second reciprocal zugzwang, and transposing into the note to White's first move in the previous example; we summarize the win again here) 2...♔e7 (or 2...h6 3 ♔e5 ♔e7 4 f5 ♔f7 5 f6 ♔f8 and White wins by the standard triangulation manoeuvre 6 ♔e4! ♔e8 7 ♔f4 ♔f8 8 ♔e5) 3 ♔e5 ♔f7 4 ♔d6! (the key idea, outflanking Black's king) 4...♔f6 5 h6! (this is a useful reciprocal zugzwang to know) 5...♔f7 6 ♔d7 ♔f6 (6...♔f8 7 ♔e6 ♔e8 8 f5 ♔f8 9 ♔f6 and White wins) 7 ♔e8 ♔e6 8 ♔f8 ♔f6 9 ♔g8 ♔g6 10 f5+ ♔xh6 11 f6 and the pawn promotes.

1...♔f8 2 ♔xf5 ♔f7?

From the above comments, it is clear that the drawing line was 2...♔e7! (2...♔g7? loses to 3 ♔e6 ♔g8 4 ♔f6 ♔f8 5 h6) 3 ♔g5 (3 ♔e5 ♔f7 is a draw after 4 f4 ♔e7 or 4 ♔d6 ♔f6) 3...♔f7 4 ♔h6 ♔g8 5 f4 ♔h8 6 f5 ♔g8 7 f6 and now both 7...♔h8 and 7...♔f7 lead to a draw.

3 ♔g4? *(D)*

With this tame retreat, White hands the half-point back again. 3 f4! ♔e7 4 ♔e5 ♔f7 5 ♔d6 wins as in the note to White's first move.

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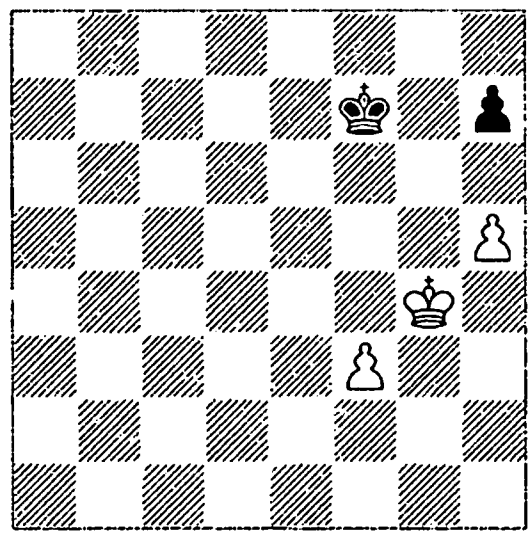

3...♔f6?

In *Informator 28*, Gufeld fails to remark on this move and after it merely appends the laconic symbol '=', even though White is now winning. Black could have drawn by 3...♔e6 (3...♔f8 also draws) 4 ♔g5 (or 4 f4 ♔f6) 4...♔f7 5 ♔f5 ♔e7, reaching the key reciprocal zugzwang with White to play.

4 ♔f4

4 f4 is quicker; for example, 4...♔g7 5 ♔g5 ♔f7 6 ♔f5 or 4...♔f7 5 ♔f5.

4...♔f7 *(D)*

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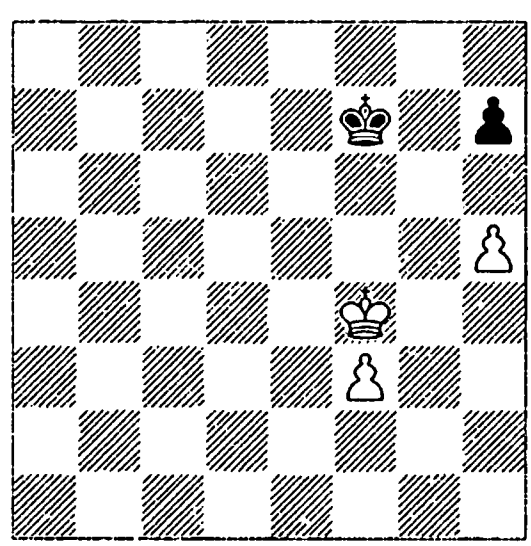


5 ♔f5?

Once again the half-point changes hands. White could have won by 5 ♔e5! ♔e7 6 f4 ♔f7 7 ♔d6 ♔f6 8 h6 as in the note to White's first

move. Note how it is possible to be deceived by mistakenly thinking that ♔f5 is good because it gains the 'opposition'. The opposition is only important when the pawn is on f4, so actually White needs to gain the 'anti-opposition' when the pawn is on the third rank.

5...♔e7

Now the reciprocal zugzwang arises with White to play, so the position is drawn. Black makes no further mistakes.

6 ♔e5 ♔f7 7 ♔d6 ♔f6 8 ♔d7 ♔f7 9 h6 ♔g6!

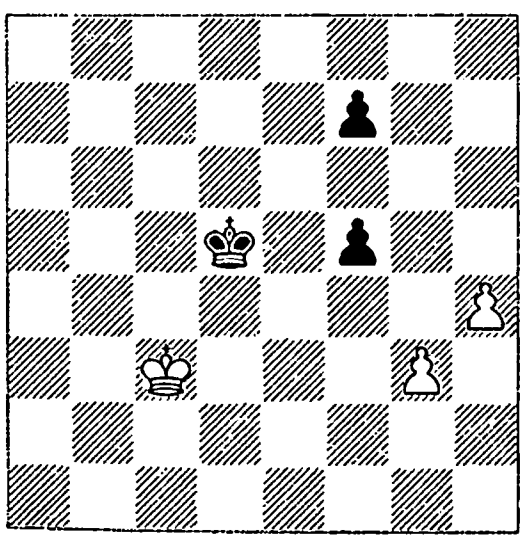
Not 9...♔f6? 10 ♔e8 ♔g6 11 f4 ♔xh6 12 ♔f7 ♔h5 13 f5 and White wins.

10 f4 ♔f7!

This switchback is the only move to draw. White wins after 10...♔xh6? 11 f5 ♔g5 12 ♔e6 or 10...♔f6? 11 ♔e8.

11 f5 ♔f6 ½-½

In the next example, possibly the greatest player of all time was confused by a reciprocal zugzwang. This example emphasizes the importance of thinking in terms of positions rather than moves. Only by linking together the key positions can one determine the crucial reciprocal zugzwang (♔f3 vs ♔e5, ♙f7) which determines the play.



Kasparov – Bacrot
Armenia-Rest of World, Moscow 2004

This position is a draw despite the doubled pawns. The basic principles are as follows:

1) If White gets his king to f4, he always wins except if Black has his king on g6 and his pawn on f6 and it is White to play. To see that it is a draw with White to play, we note that if White manoeuvres with his king Black simply oscillates with his own king between h6 and h5, always being ready to meet ♔f4 by ...♔g6. If White plays h5+, then ...♔h6! draws, meeting ♔xf5 by ...♔xh5, as then White is to play in a reciprocal zugzwang. Other formations for Black are lost against a king on f4; for example, if Black's king is on f6 and it is Black to play, then the white king penetrates to e5 or g5, while if it is White to play, then he plays h5 and Black is in zugzwang (indeed, this is reciprocal zugzwang).

2) Suppose White's king is on f3 and Black's pawn is on f7. If White is to play then he always wins except if Black's king is on e5. The only doubtful position is when Black's king is on g6, but then White plays 1 ♔e3! (not 1 ♔f4? f6!). However Black replies, White wins with ♔f4 next move.

3) Now we can see that ♔f3 vs ♔e5, ♙f7 is reciprocal zugzwang. If Black is to play then 1...f6 2 h5 and 1...f4 2 g4 are lost for him, while otherwise the white king reaches f4. If White is to play, his only reasonable moves are 1 h5 and 1 ♔e3, but 1 h5 ♔e6! (not 1...♔f6? 2 ♔f4) 2 ♔e3 (2 ♔f4 ♔f6!) 2...♔e5! is a draw, while 1 ♔e3 f4+! 2 gxf4+ ♔f6! (2...♔f5? 3 h5!) 3 ♔f3 (3 ♔e4 ♔g6) 3...♔g6 4 ♔g4 f5+ also saves Black. This reciprocal zugzwang is fundamental to the ensuing play.

1 ♔d3 ♔e5!

The only move as 1...♔e6? loses to 2 ♔e3 ♔e5 (otherwise White's king reaches f4) 3 ♔f3 with the reciprocal zugzwang mentioned above.

2 ♔e2

2 ♔e3 f4+ is a draw as above, so Kasparov tries a finesse, attempting to reach the f-file without allowing the ...f4 trick.

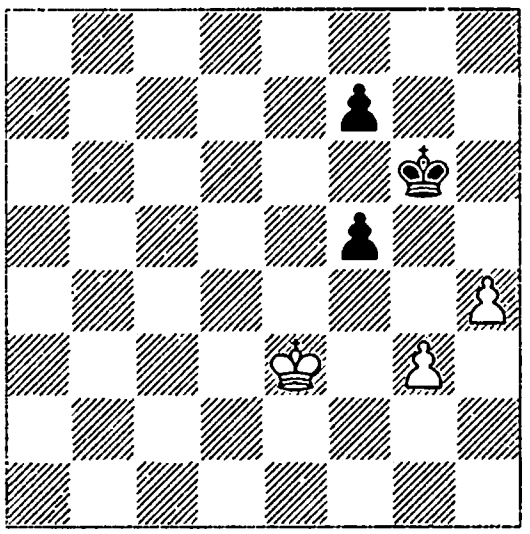
2...♔f6?

This move should lose. Black's king has to be able to stay in contact with e5 so as to meet ♔f3 with ...♔e5, but on f6 the king lacks manoeuvring space. 2...♔e4 draws since after 3 ♔f2 ♔d4! (the only move) 4 ♔g2 ♔e4 White cannot make progress, while 2...♔d4 draws in a similar way.

3 ♔e3!

Now White is winning.

3...♔g6 *(D)*



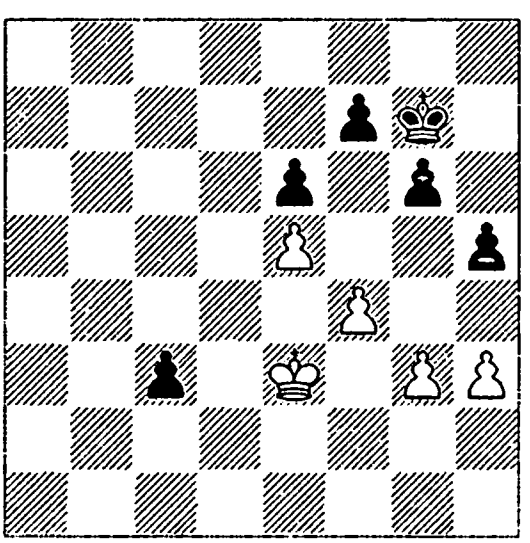
4 ♔d4?

Missing the win. 4 ♔f4? is also wrong as 4...f6 is one of the reciprocal zugzwangs mentioned above. 4 ♔f3! was the move, and however Black plays White wins with ♔f4 next move; for example, 4...♔g7 (4...♔f6 5 ♔f4) 5 ♔f4 ♔g6 (or 5...♔f6 6 h5 ♔e6 7 ♔g5) 6 ♔e5 f6+ 7 ♔e6 and Black loses a pawn.

4...♔h5 ½-½

After 5 ♔e5 ♔g4 Black easily holds the draw.

The following example is curious, because White missed a draw based on a reciprocal zugzwang, and instead adopted a line that allowed Black to win by using a different reciprocal zugzwang.



Grancharov – Tabakov
Bulgaria 1974

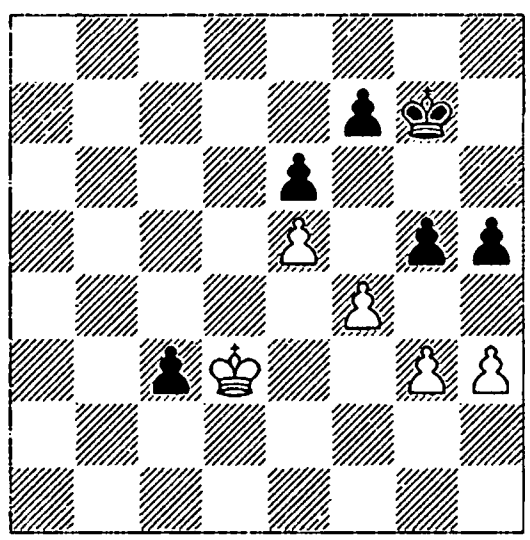
Black's c-pawn is doomed, but while White is taking it, Black can open up a route for his king to penetrate on the other side of the board.

1 ♔d3

The only chance, as 1 h4 f6 2 ♔d3 fxe5 3 fxe5 g5 4 ♔xc3 gxh4 5 gxh4 ♔g6 6 ♔d3 ♔f5 and 1 g4 hxg4 2 hxg4 g5 are easily winning for Black.

1...g5 *(D)*

1...h4 2 g4 g5 3 fxg5 ♔g6 4 ♔xc3 ♔xg5 5 ♔d3! ♔f4 6 ♔d4 ♔g3 7 ♔e3 ♔xh3 8 ♔f3 ♔h2 9 ♔f2 and White draws because after 9...h3 he can use his reserve tempo 10 g5 to maintain the opposition.



2 ♔xc3?

The losing move. In *Informator 17*, annotator Minev considered the diagram position to be winning for Black because he didn't spot the drawing line 2 fxg5! ♔g6 3 ♔xc3 (3 h4? loses to 3...♔f5 4 ♔xc3 ♔xe5) 3...♔xg5 4 ♔d3! (4 ♔d4? is a mistake because after 4...♔f5 it is White to play in a reciprocal zugzwang) 4...♔f5 (4...h4 5 g4 ♔f4 6 ♔d4 is a draw, as in the note to Black's first move) 5 ♔d4 and now Black is to play and the position is a draw.

2...h4!

This breakthrough forces White to concede his f-pawn.

3 g4

Or 3 gxh4 gxf4 4 ♔d3 f6 and the connected passed pawns are decisive.

3...gxf4 4 ♔d4 f5

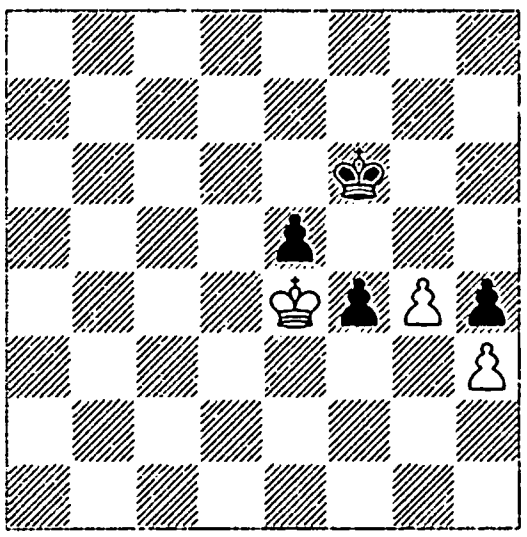
Black is in time to save the f4-pawn.

5 exf6+

5 gxf5 exf5 6 ♔d3 ♔f7 wins for Black.

5...♔xf6 6 ♔e4 e5 *(D)*

W

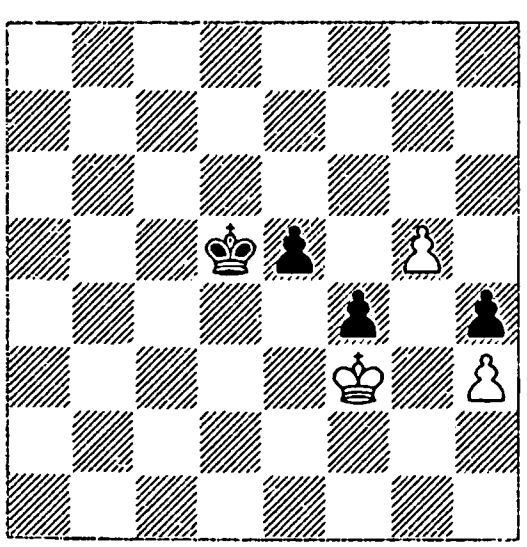


7 ♔f3 ♔g5

Black takes a detour but finally arrives at the winning position. He could have taken a shortcut by 7...♔e6 8 ♔e4 ♔d6 9 ♔f3 ♔d5, saving two moves.

8 ♔e4 ♔g6 9 ♔f3 ♔f6 10 ♔e4 ♔e6 11 ♔f3 ♔d5 12 g5 *(D)*

B



12...♔d6!

A neat finesse. After 12...♔e6? 13 ♔g4 Black is to play in a reciprocal zugzwang and only draws after 13...♔f7 14 ♔xh4 or 13...f3 14 ♔xf3 ♔f5 15 g6 ♔xg6 16 ♔g4.

13 ♔g4

Black also wins after 13 ♔e4 ♔e6 followed by ...♔f5.

13...♔e6

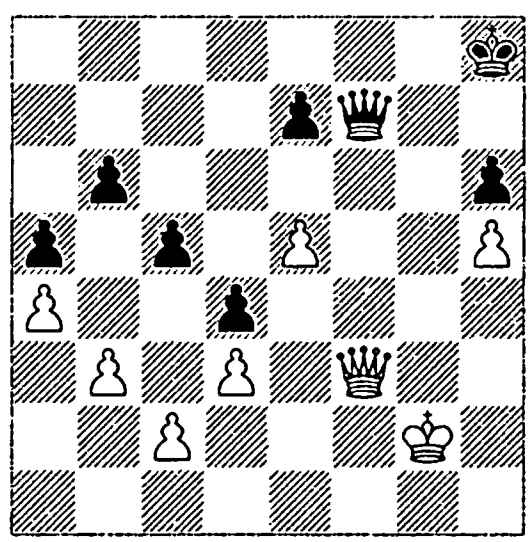
Now it is White to play and he loses.

14 ♔xh4 ♔f5 15 ♔h5 f3 16 g6 f2 0-1

The finish would be 17 g7 f1♕ 18 g8♕ ♕xh3#.

In many endings with pieces, the possibility arises of a liquidation into a pawn ending. Assessing the result of such a liquidation may not be easy, since you may have to look a considerable distance ahead. Moreover, if the result is not the one you were hoping for, your time is likely to have been wasted since the work you have done is unlikely to help in analysing other possibilities.

B



Glek – G. Grigore
Castellaneta 2000

Even in analysis, it's possible for strong grandmasters to evaluate a liquidation to a pawn ending incorrectly. Glek's notes in *Informator 80* wrongly claimed that Black could have won by exchanging queens, but the resulting ending is drawn thanks to a defence based on a reciprocal zugzwang. It follows that both players conducted the game accurately. First, let's see how the game went.

1...♕g7+ 2 ♔h3!

The best square for the king. Although Black wins a pawn, his king is exposed to checks and he cannot evade these while keeping his queen in an active central position. White loses after 2 ♕g3? ♕xg3+ 3 ♔xg3 e6 as he is a crucial tempo down over the 1...♕xf3+ 2 ♔xf3 e6 line given below.

2...♕xe5 3 ♕f8+ ♔h7 4 ♕f7+ ♕g7 5 ♕f5+ ♔h8

Or 5...♔g8 6 ♕e6+ ♔f8 7 ♕xb6 ♕g5 8 ♕xa5 ♕xh5+ 9 ♔g3 ♕g5+ 10 ♔h3 ♕e3+ 11 ♔h4 ♕f2+ 12 ♔g4 and the passed a-pawn means that White will have no trouble drawing.

6 ♕c8+ ♕g8 7 ♕f5

Provided White keeps his queen on an active square, Black cannot make progress.

7...♕b8 8 ♔g4 ♕g8+ 9 ♔f4

Repeating by 9 ♔h3 is also safe.

9...♕e8

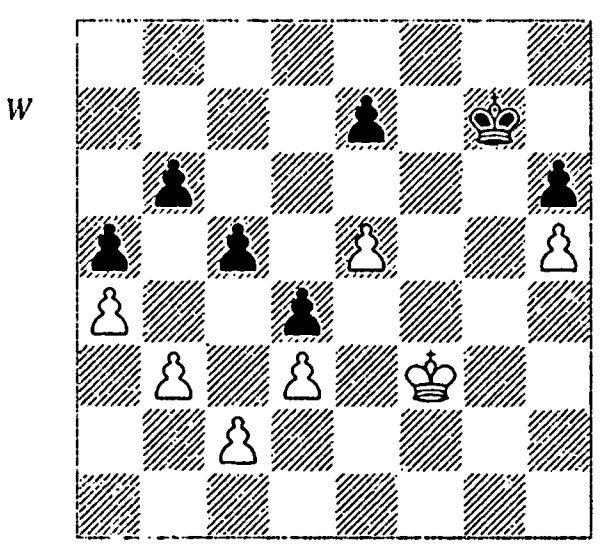
9...♕g7 is met by 10 ♕e5! ♕f6+ (10...♔g8? 11 ♕xg7+ ♔xg7 12 ♔e5 ♔f7 13 ♔d5 ♔f6 14 ♔c6 is winning for White) 11 ♕xf6+ exf6 12 ♔f5 ♔g7 13 ♔e6 f5! 14 ♔xf5 ♔f7 with a draw.

10 ♕e5+ ½-½

Now let's look at the line Glek claimed was a win for Black.

1...♕xf3+ 2 ♔xf3 ♔g7 *(D)*

The immediate 2...e6 leads to a draw because White has time to open up the queenside by pawn exchanges before Black's king can reach d5: 3 ♔e2 ♔g7 4 ♔d2 ♔f7 5 c4 dxc3+ 6 ♔xc3 ♔e7 7 d4 ♔d7 8 dxc5 bxc5 9 ♔d3 and White simply keeps his king on c3 or d3, always being ready to meet ...♔c6 by ♔c4.



This is the critical position in which White has to find the correct plan.

3 e6!

Sacrificing the e-pawn is the only way to save the game. Glek only analysed 3 ♔e4?, which does indeed lose after 3...e6! since playing the king round to d2 is now too slow: 4 ♔f3 ♔f7 5 ♔e2 (5 ♔e4 ♔e7 6 ♔f4 ♔d7 7 ♔e4 ♔c6 8 ♔f3 b5! 9 axb5+ ♔xb5 10 ♔e2 a4 11 bxa4+ ♔xa4 12 ♔d1 ♔a3 13 ♔c1 ♔a2 14 ♔d1 ♔b1 15 ♔d2 ♔b2 16 ♔d1 ♔c3 17 ♔c1 c4 is also winning for Black) 5...♔e7 6 ♔d2 ♔d7 7 c4 dxc3+ 8 ♔xc3 ♔c7! 9 d4 (9 ♔c4 ♔c6 10 d4 transposes) 9...♔c6 10 ♔c4 cxd4 11 ♔xd4 b5! 12 axb5+ (12 ♔e4 bxa4 13 bxa4 ♔c5 is also decisive) 12...♔xb5 13 ♔d3 ♔c5 14 ♔c3 ♔d5 and Black wins the e-pawn.

3...♔f6 4 ♔f4!

This triangulation is essential, because the position after 4 ♔e4? ♔xe6 is reciprocal zugzwang; here White is to play and loses after 5 ♔f4 ♔f6 6 ♔g4 ♔e5, etc.

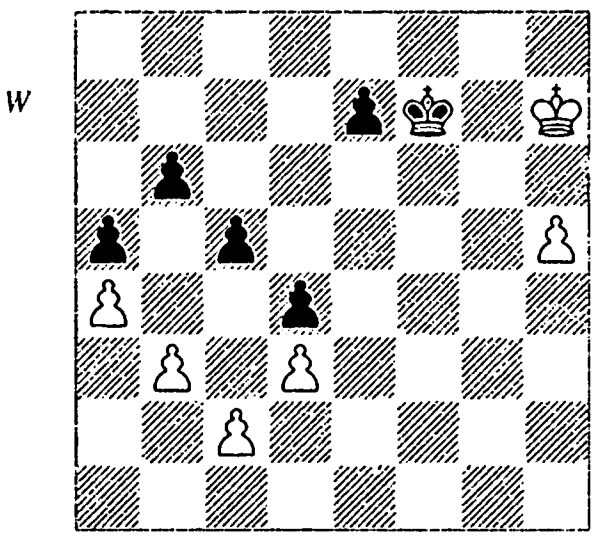
4...♔xe6 5 ♔e4

Now, whichever way Black goes, White's king can penetrate.

5...♔d6

5...♔f6? 6 ♔d5 even favours White.

6 ♔f5 ♔d5 7 ♔g6 ♔e6 8 ♔xh6 ♔f6 9 ♔h7 ♔f7 *(D)*



10 ♔h6!

But not 10 h6? e5 11 ♔h8 ♔g6 12 h7 (12 ♔g8 ♔xh6 13 ♔f7 ♔g5 14 ♔e6 ♔f4 is also winning for Black) 12...♔f7 and White must commit suicide on the queenside.

10...♔f6 11 ♔h7

Black has nothing better than to repeat moves.

Summary:

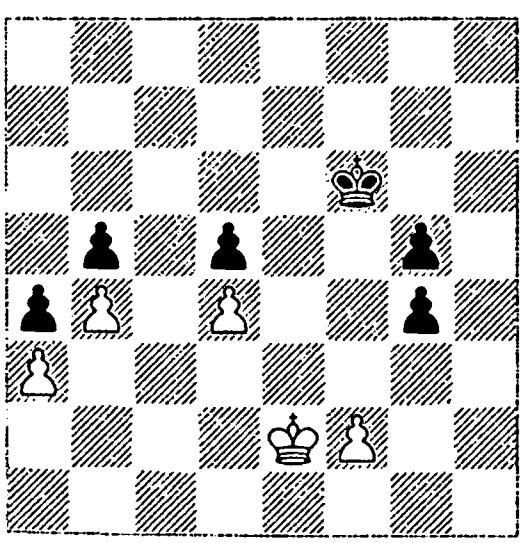
- Reciprocal zugzwangs arise frequently in pawn endings. The opposition is a simple case, but there are many other more complicated possibilities.

- When there is the possibility of reciprocal zugzwang, it is important to think first in terms of positions, and only when the key positions have been identified to consider moves and variations.
- Some deceptive positions may appear to be based on the opposition, but are not. Beware!

2.2.5 Corresponding Squares

In some situations, king manoeuvres arise which are more complex than those involved in triangulation and the opposition. In these cases there are networks of squares through which the kings move, trying to gain control of critical points. Theorists call these networks *corresponding squares* and have devoted a good deal of attention to them. We won't be too concerned with the theoretical basis of corresponding squares, but shall instead focus on how it is possible to analyse these networks in over-the-board play and thus determine the correct move. In most cases, it isn't necessary to analyse actual moves at all. Instead, what is important is to determine the pairs of squares that correspond to one another; in each pair there is one for the white king and one for the black king. The type of logic involved is quite different from normal chess analysis, and the best way to explain it is by means of an example.

W



Crosa – Molina
Vitoria 2006

This is a good practical example involving corresponding squares. If Black can exchange his front g-pawn for White's f-pawn, then he will have an extra passed g-pawn and an easy win. Therefore, White must meet ...♔f5 by ♔e3 and ...♔h4 by ♔g2. It's easy to see that if we have ♔e3 vs ♔f5 and Black heads for h4, White can just about match Black's manoeuvre: he meets ...♔g6 by ♔e2, ...♔h5 by ♔f1 and finally ...♔h4 by ♔g2. Thus we have already determined several pairs of corresponding squares: e3 vs f5, e2 vs g6, f1 vs h5 and g2 vs h4. When we say that a pair of squares 'corresponds', this means that when the black king is on the second square of a pair, then in order to draw the white king must stand on the first square of the pair.

From the pairs of squares given above, it is easy to work out some more. For example, if Black's king is on h6, then White must be prepared to meet ...♔g6 by ♔e2 and ...♔h5 by ♔f1. Thus White's king must be on a square adjacent to both e2 and f1, and this can only be e1. Now we can add e1 vs h6 to the list. When the black king is further back, White has more flexibility with his king position; for example, when Black's king is on g7 or h7 the white king can be on d1 or d2, and when the black king is on f6 the white king can be on d2 or d3. Notice that this analysis doesn't involve any variations; it depends solely on the geometrical connections between the squares.

Once one has analysed the position and obtained a list of corresponding squares, playing the position out usually involves little more than simply referring to the list (which in a real game must be kept in memory as it is constructed).

1 ♔d3

1 ♔d2 is also good.

1...♔g7

1...♔g6 2 ♔e2! ♔f5 3 ♔e3 g3 4 fxg3 ♔g4 5 ♔f2 is a draw as 5...♔h3? even loses to 6 ♔f3.

2 ♔d2!

We know that with Black's king on g7, the white king must be on d1 or d2, and the only one of these squares within reach is d2. Other moves lose: 2 ♔e3? ♔h6! (White's king is too far away from e1, the square which corresponds to h6) 3 ♔e2 ♔g6! 4 ♔d3 ♔h5 5 ♔e2 ♔h4 and Black wins, or 2 ♔e2? ♔g6!, transposing.

2...♔g8

Black manoeuvres around with his king, trying to confuse White. 2...♔h6 is safely met by 3 ♔e1!.

3 ♔d1

When the black king is so far back, White's king can be more or less anywhere.

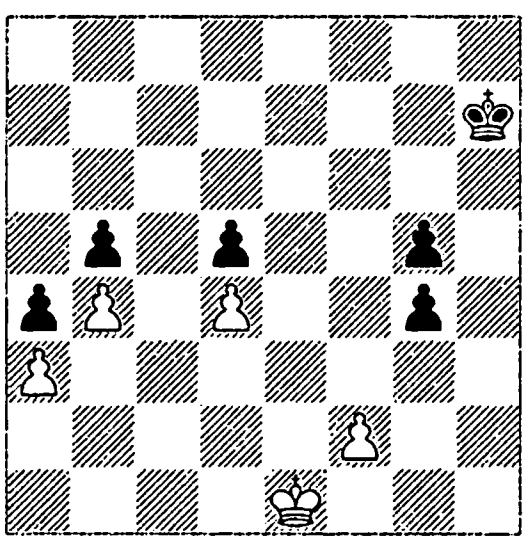
3...♔h7

White has to take a little care here, because he must be ready to meet ...♔g6 by ♔e2 and ...♔h6 by ♔e1. This means that his king must be on d1 or d2, and so 4 ♔d2! is the only drawing move.

4 ♔e1? *(D)*

White has lost track of the correspondence and puts his king on the wrong square.

B



4...♔g7?

Missing a golden opportunity to gain control of the correspondence and force a win. 4...♔h6! would have been decisive: 5 ♔f1 (or 5 ♔e2 ♔g6!, as in the note to White's second move) 5...♔h5 6 ♔g2 (6 ♔g1 ♔g6! 7 ♔g2 ♔f5 8 ♔g3 transposes) 6...♔g6! 7 ♔h2 (White's king is too far from e3, so he has to try defending with his king on g3; however, this proves inadequate) 7...♔f5 8 ♔g3 ♔e4 9 ♔xg4 ♔xd4 10 ♔xg5 ♔c3 11 f4 d4 12 f5 d3 13 f6 d2 14 f7 d1♕ 15 f8♕ ♕d2+ 16 ♔h5 ♕e2+ (defending b5 with gain of tempo) 17 ♔h6 ♔b3 and White's queenside pawns fall.

5 ♔d2

5 ♔d1 is equally good.

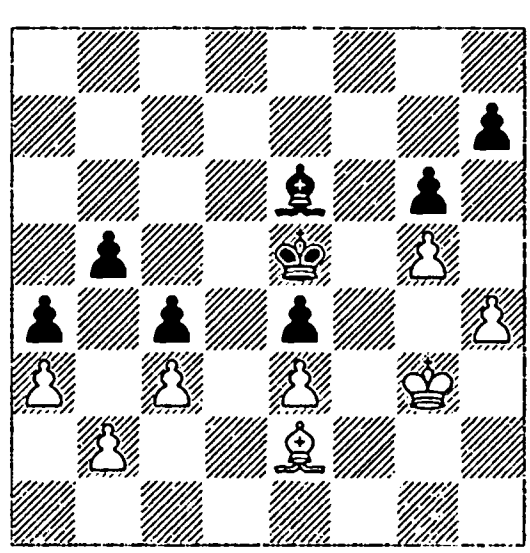
5...♔f6 6 ♔d3!

White is now back on track and defends accurately to hold the draw. After your opponent has been to each square once, you only have to refer to your scoresheet to find the correct move (assuming you made the right move the first time!).

6...♔g6 7 ♔e2 ♔f7 8 ♔e3 ♔g7 9 ♔d2 ♔h6 10 ♔e1! ♔h7 11 ♔d1 ♔g7 12 ♔d2 ♔f8 13 ♔e3 ♔e8 14 ♔d2 ♔f7 15 ♔d3 ♔g7 16 ♔d2 ♔h7 17 ♔d1! ♔h6 18 ♔e1 ♔h5 19 ♔f1 ♔g6 20 ♔e2 ♔f5 ½-½

Even if the defender has the 'correspondence', that is to say his king is already on the correct square, he doesn't always draw. In some cases the attacker can win even when he doesn't initially hold the correspondence. The situation is analogous to that we discussed earlier involving the opposition, in that if the defender's king is restricted in some way, the attacker may be able to seize the opposition from the opponent. Whether this is possible in a position involving corresponding squares can usually be determined solely by looking at the list of correspondences. For example, let's suppose that White is the attacker and that g2 vs e5 and h2 vs e5 are both valid correspondences. Then White can win by playing his king to g2, forcing Black to play his own king to e5; White then continues ♔h2 and Black is on the wrong end of the correspondence. Many of the positions we discussed earlier involving the opposition and triangulation are actually special cases of this situation.

W



Tobak – Vasiliev
Ukraine 1992

All Black's pawns are on light squares, so his bishop is theoretically very 'bad'. However, it turns out that this has little relevance for the subsequent play, since at the moment there is no way for White to make progress and the first thing he has to do is to exchange bishops. Black can't avoid this exchange because he cannot allow White's bishop to penetrate into his position and attack the numerous vulnerable pawns. However, once the exchange takes place, the 'bad bishop' element of the position disappears. Why, then, should White be better (indeed, winning, as it turns out) without the bishops? The reason is that there are various factors in White's favour unrelated to the bishops. First of all, the pawn-structure in the centre of the board means that if White can force the exchange of all the kingside pawns then he will generally win, as Black will eventually lose the e4-pawn. The second point is that thanks to White's space advantage on the kingside he controls the f6-square, and this restricts the ability of the black king to manoeuvre. These two factors prove sufficient to tip the balance decisively in White's favour. This endgame was well analysed by Bogdanov and Eingorn in *Informator 54* and the following analysis is an expanded version of their work.

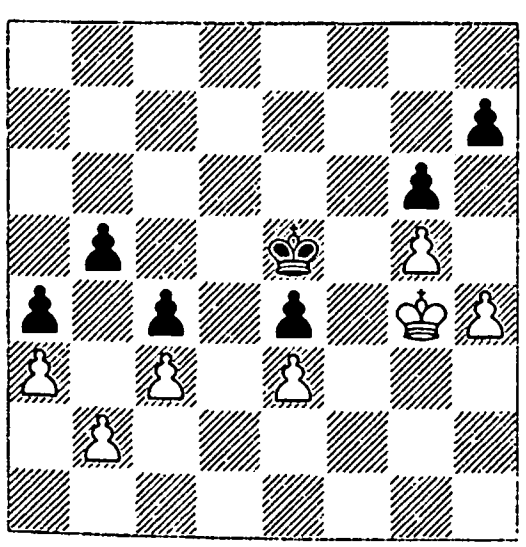
1 ♗g4!

Without more ado, White swaps the bishops.

1...♗xg4

This makes life relatively easy for White. 1...♗f5 forces White to work harder and we shall consider this possibility below.

2 ♔xg4 *(D)*



B

Now the white king gets to f4 without a fight.

2...♔e6 3 ♔f4 ♔d5 4 h5!

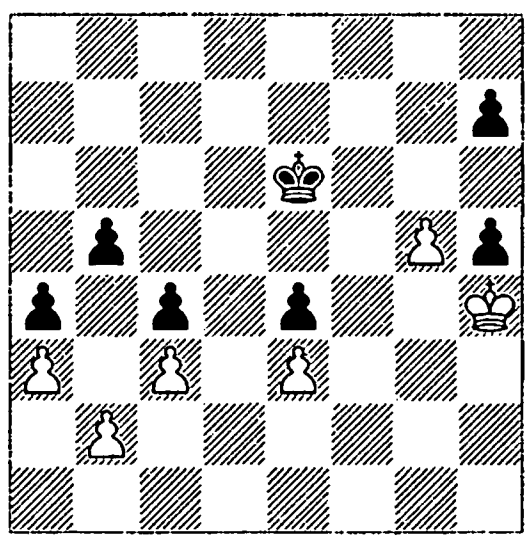
Black must take, since otherwise he just loses the e4-pawn.

4...gxh5

Now White returns to pick up the h5-pawn, after which he has liquidated one pair of kingside pawns and is halfway towards his goal.

5 ♔g3 ♔e5 6 ♔h4 ♔e6 *(D)*

The only chance, as after 6...♔f5 7 ♔xh5 followed by g6 White reaches his target immediately.



W

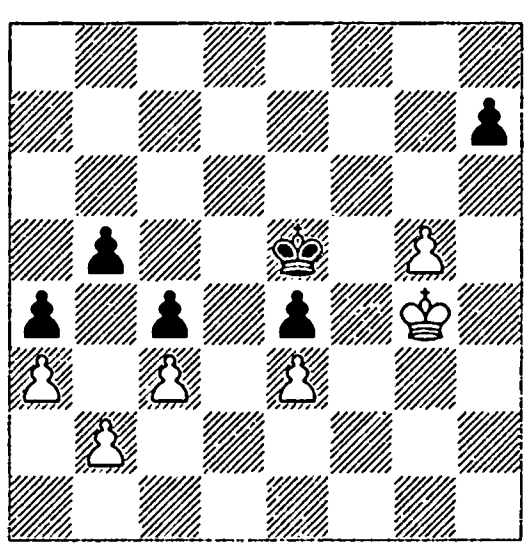
7 ♔xh5 ♔f5 8 ♔h4

The only move not to lose, but a strong one. Black is again in zugzwang and must allow White's king to occupy g4.

8...♔e6

After 8...♔g6 9 ♔g4 ♔g7 10 ♔f5 White wins the e-pawn.

9 ♔g4 ♔e5 *(D)*



W

Forced, to prevent ♔f4.

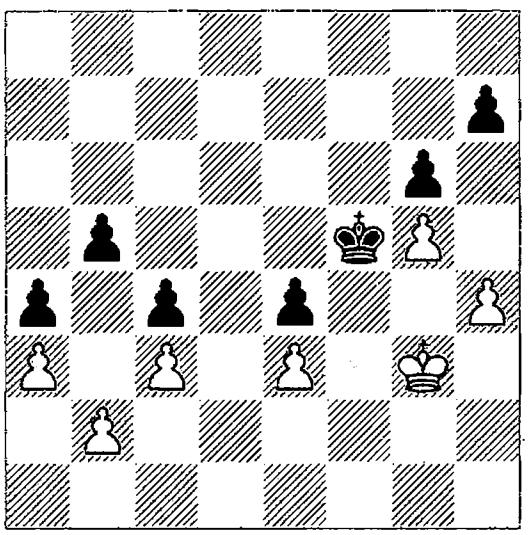
10 g6! 1-0

The final point. After 10...hxg6 11 ♔g5 ♔d6 12 ♔xg6 White has achieved his objective and wins; for example, 12...♔e6 13 ♔g5 ♔e5 14 ♔g4 and the e-pawn falls in a few moves, with an easy win.

Now let's go back and examine Black's best defence.

1...♗f5 2 ♗xf5 ♔xf5 *(D)*

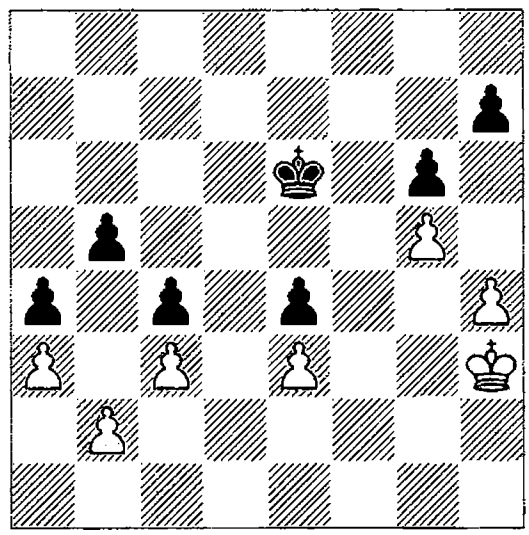
W



How can White force his king to f4? The first point to note is that if Black were to move here, it would be easy since Black has to play ...♔e5, but after ♔g4 he must already allow White to occupy f4. Thus ♔g3 vs ♔f5 is zugzwang. Now suppose that White's king is on h3 and Black's king is on e6, with Black to play; then ...♔d6/d5 loses to ♔g3 followed by ♔g4, ...♔e5 loses to ♔g4 and ...♔f5 loses to ♔g3. Thus this is also zugzwang. Now suppose that White's king is on g2 and Black's king is on e5, with Black to play. Then ...♔d5/d6 loses to ♔g3 and ♔g4 as before, ...♔f5 loses to ♔g3 and ...♔e6 loses to ♔h3. Thus this is a third zugzwang. But exactly the same logic applies when White's king is on h2; so both ♔g2 vs ♔e5 and ♔h2 vs ♔e5 are zugzwang positions. Black's problem is that his king cannot move to f6, so while White's king has access to all four squares in the box g2-h2-g3-h3, Black's king has access to only three squares in the corresponding box e5-f5-e6-f6. Using this logic it's not too hard to force the king to f4.

3 ♔h3 ♔e6 *(D)*

W



4 ♔g2!

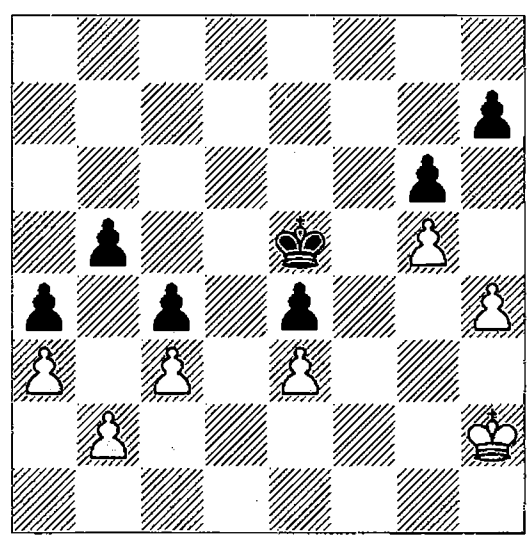
Note that White mustn't play h5 before his king has reached f4, since after 4 ♔g4 ♔e5 5 h5?, for example, Black is not forced to take on h5 but can simply wait with 5...♔e6. Once White has weakened the g5-pawn by playing h5 he can no longer manoeuvre to lose a tempo and so the position is now drawn.

4...♔e5

Maintaining the correspondence for the moment. 4...♔d6/d5 loses to 5 ♔g3 and ♔g4, while 4...♔f5 loses to 5 ♔g3.

5 ♔h2! *(D)*

B



White exploits the fact that both g2 and h2 correspond to e5 to put Black is zugzwang.

5...♔e6 6 ♔h3

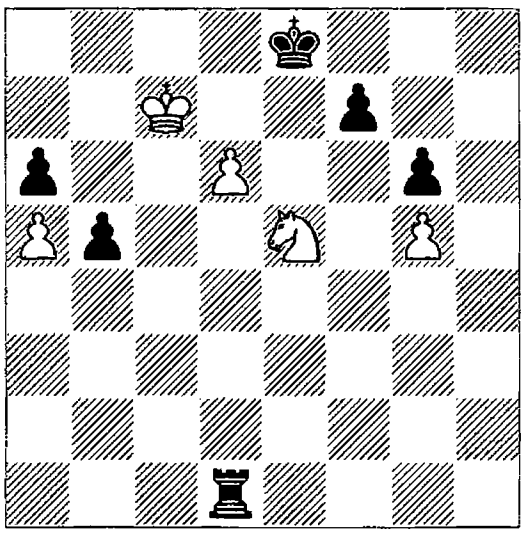
Another zugzwang.

6...♔f5 7 ♔g3 ♔e5 8 ♔g4 ♔e6

We have transposed into the game, which we know to be a win for White.

In the following example Black undertook a faulty liquidation which allowed White to escape with a draw thanks to his accurate analysis of a system of corresponding squares.

B



Glek – Hector
Copenhagen 1995

Black was deceived by the strength of his protected passed b-pawn, and incorrectly decided to give up his rook for White's knight, thereby throwing away the win.

1...♖c1+?

Victory could have been secured by sacrificing the rook for the d-pawn rather than the knight: 1...b4! 2 d7+ ♖xd7+ 3 ♘xd7 b3 4 ♘f6+ and now:

1) 4...♔e7? 5 ♘e4 (contrary to Glek's notes, 5 ♘d5+ ♔e6 6 ♘c3 f5 7 gxf6 g5 is also a draw after 8 ♘e4! g4 9 ♘c5+ ♔xf6 10 ♘xb3 g3 11 ♘d4) 5...b2 6 ♘c3 f5 7 gxf6+ ♔xf6 8 ♔b6 g5 9 ♔xa6 g4 10 ♔b5 g3 11 a6 g2 12 a7 g1♕ 13 a8♕ and Black cannot win.

2) 4...♔f8! 5 ♘e4 b2 6 ♘d2 f5! 7 gxf6 g5! and White cannot stop the widely separated passed pawns.

2 ♘c6 ♖xc6+

Attempting to backtrack by 2...♖d1 3 ♘b4 (3 ♘e5? gives Black a second chance to play the winning move 3...b4!) also fails to win:

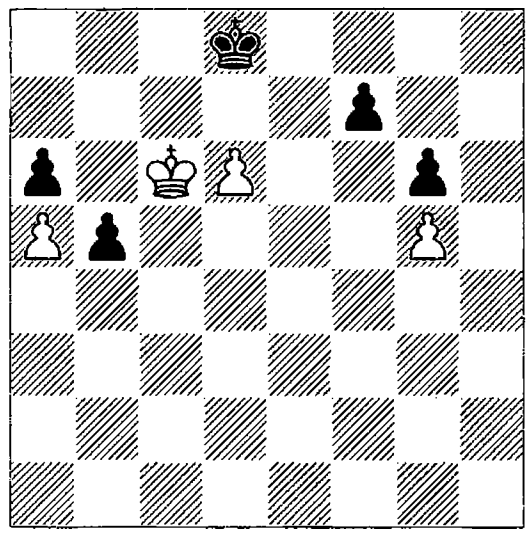
1) 3...f5 4 gxf6 g5 5 ♘xa6 g4 6 ♘c5 g3 7 a6 g2 8 a7 g1♕ 9 a8♕+ ♔f7 10 ♕a2+ ♔xf6 11 ♕e6+ is a draw.

2) 3...♖d2 4 ♔c6! (not 4 ♘c6? f5! 5 gxf6 g5 and Black wins) takes advantage of the fact that there is no check on c2; Black cannot make progress since 4...♔d8? actually loses after 5 ♘xa6.

3) 3...♖d4 4 ♘c6! (not 4 ♘xa6? ♖c4+ 5 ♔b6 ♔d7 6 ♘c5+ ♔xd6 7 ♘b7+ ♔d7! 8 a6 ♖c6+ 9 ♔xb5 ♔c7 and Black is winning) 4...♖d2 (after 4...♖d3 5 ♘b4 Black is not making progress) 5 ♘b4 ♖d1 (attempting to put White in zugzwang, as now 6 ♘c6? f5! wins for Black) 6 ♘xa6 ♖c1+ 7 ♔b6 ♔d7 8 ♘b4! and the a-pawn provides enough counterplay to draw.

3 ♔xc6 ♔d8 *(D)*

W

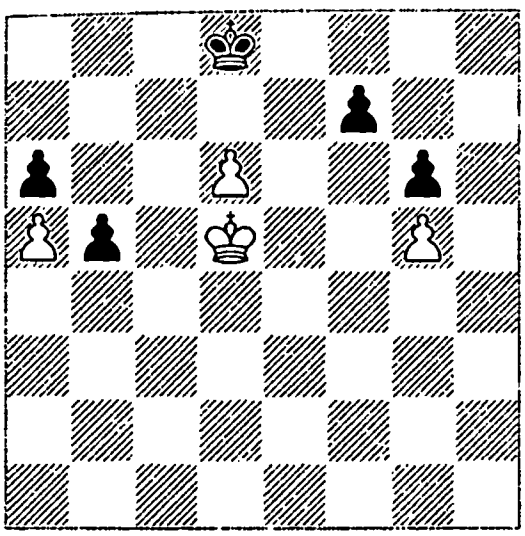


This is the position Black was aiming for. He is a pawn up, and has a protected passed b-pawn, but he cannot win. The extra pawn on the kingside is for the moment of no value, since Black's two pawns are restrained by the lone g-pawn. Perhaps more surprising is Black's inability to do much with the b-pawn. Here the problem is the lack of space for Black's king, which means that any king manoeuvres in the triangle d7-c8-d8 can be mirrored by White manoeuvring his king in the triangle c5-d4-d5. In the end, all Black can do is to push the b-pawn, thus exchanging the b- and d-pawns. Black is still a pawn up, and can even gain the opposition, but both white pawns are quite far advanced and it turns out that whichever way the black king heads, the ensuing race ends up with White drawing.

4 ♔d5! *(D)*

The correct choice of square, since when Black's king is on d8. White's king must be on d5. 4 ♔c5? loses after 4...♔d7 5 ♔d5 b4 6 ♔c4 ♔xd6 7 ♔xb4 ♔d5 and Black wins the a-pawn under favourable circumstances, as here White's king is too far away from the kingside pawns.

B



4...♔c8 5 ♔d4!

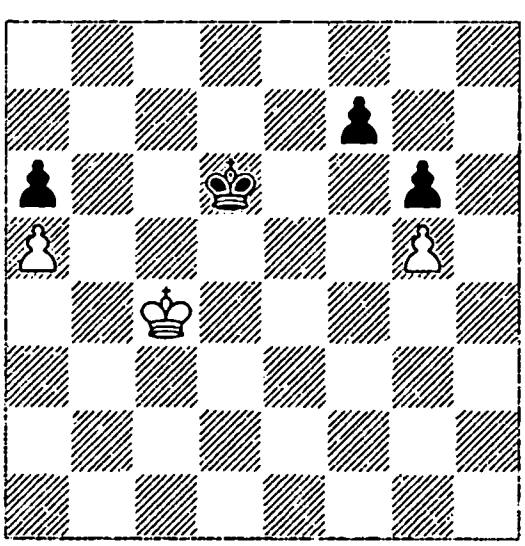
We know that when Black's king is on d7, White's king must be on c5, and when Black's king is on d8, White's king must be on d5. Thus when Black's king is on c8, White must be ready to meet ...♔d8 by ♔d5 and ...♔d7 by ♔c5, so White's king must be on a square adjacent to c5 and d5, and this can only be d4.

5...♔d7 6 ♔c5 b4

The last winning attempt.

7 ♔xb4 ♔xd6 8 ♔c4 *(D)*

B



The remaining moves of this game are given incorrectly in *Informator 63*, making it appear that there was a double blunder (which is, however, not commented on in the notes!).

8...♔e6

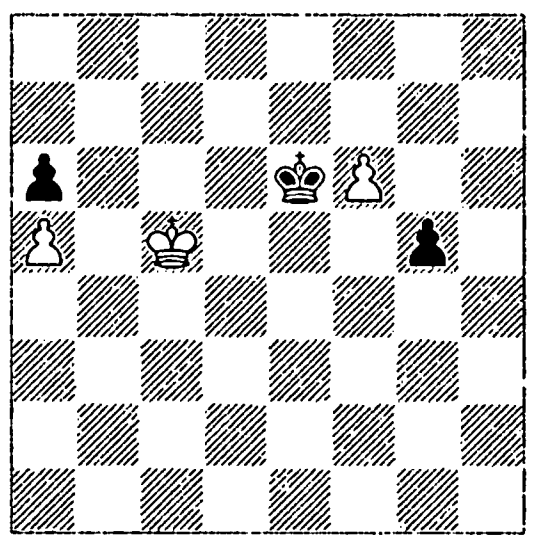
If Black heads for the queenside, the outcome is similar: 8...♔c6 9 ♔d4 ♔b5 10 ♔e5 ♔xa5 11 ♔f6 ♔b6 12 ♔xf7 a5 13 ♔xg6 a4 14 ♔h7 and both sides promote at the same time. The final part of this example shows clearly why a space advantage is often very important in king and pawn endings. Such endings often turn into a race, with one king heading to the kingside and the other to the queenside. If one side's pawns are initially further advanced, that side will have a head start in the race.

9 ♔c5 f5

9...♔f5 10 ♔b6 ♔xg5? even loses after 11 ♔xa6 f5 12 ♔b5! f4 13 ♔c4 ♔g4 14 a6 f3 15 ♔d3 ♔g3 16 a7 f2 17 ♔e2.

10 gxf6 g5 *(D)*

W



11 ♔d4

11 ♔b6 g4 12 ♔xa6 g3 13 f7 ♔xf7 14 ♔b7 g2 15 a6 g1♕ 16 a7 also draws.

11...♔xf6 12 ♔e4

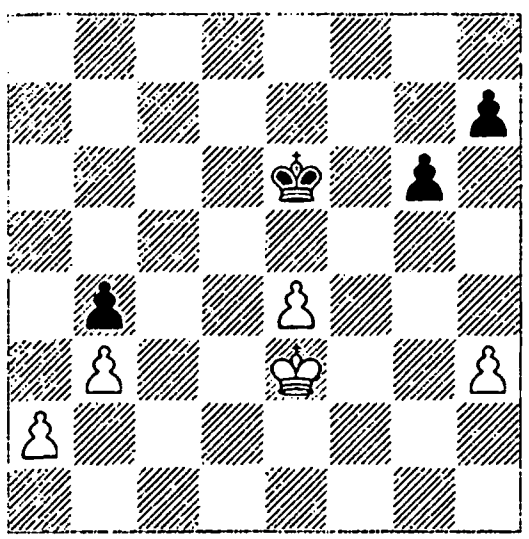
It's a draw, as a simple calculation will reveal.

12...♔e6 13 ♔f3 ♔d5 14 ♔g4 ♔c5 15 ♔xg5 ♔b5 16 ♔f4 ½-½

White gets back to c1 just in time.

Theoretical discussions of corresponding squares have generally focused on neat positions in which the pawns are completely blocked and only the kings can move. The practical examples we have considered up to now have fallen

into this category, since any pawn moves which were available did not affect the analysis. However, the real world is often not so accommodating as to serve up such orderly positions, and practical examples often contain mobile pawns. This increases the complexity considerably, since any pawn move will almost inevitably have an impact on the king manoeuvres. The following example is typical of the difficulties involved.



Ilinsky – Magerramov (analysis)
corr. 1990

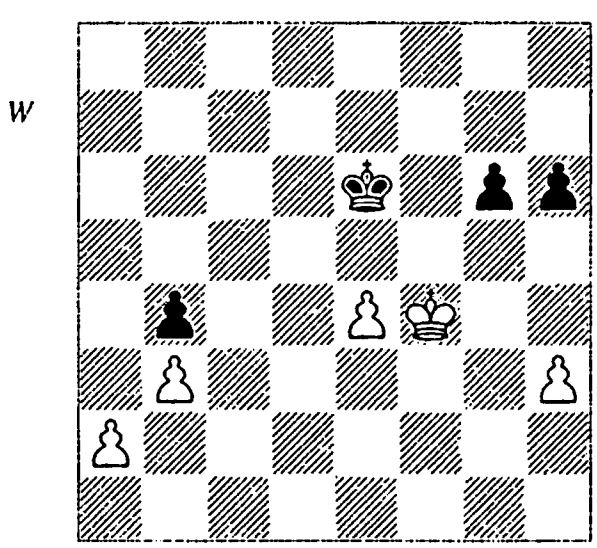
This position was given in *Informator 51* with notes by Magerramov, but it was not made clear that it didn't arise in the game itself. Instead it is a position which White could have forced had he wanted to (White actually played something else and lost quickly). Would White have done better had he headed for this position? It's an intriguing question. White is a pawn up, but his extra pawn has no immediate value as it is the backward a-pawn. The most that can be said about this pawn is that if Black's king makes a run for White's queenside, it will take two moves longer to capture the b3-pawn than if the a-pawn were not present (...♔b2, ...♔xa2 and ...♔xb3 rather than ...♔xb3 at once). The main factor in Black's favour is that he has the possibility of creating an outside passed pawn on the kingside. If he can use this to deflect the white king, then he will probably win because once Black takes the a-pawn he is sure to win unless White can immediately take the b4-pawn in reply (in which case White wins). According to Magerramov's notes, the position is winning for Black, but actually White can draw by a difficult and counter-intuitive defence. Even though this defence is far from obvious, it is nevertheless surprising that it was missed by both players in a correspondence game (for if White had seen the draw, he would surely have headed for this position).

1 ♔f4

The right direction for the king (the only other drawing move is 1 ♔f3). After 1 ♔d4? g5 Black gets his pawns to g5 and h5, when he is sure to win.

1...h6 *(D)*

Stopping ♔g5 is obvious and best. If Black plays 1...♔f6 instead, a curious sequence unfolds: 2 e5+ (2 ♔g3 also draws) 2...♔f7 3 ♔g5 ♔g7 4 ♔f4 ♔f7 with a repetition. The odd thing here is that after 2 e5+ every move by both sides is forced to avoid loss.



After 1...h6, it's time to pause for some careful analysis. The main line below shows that White loses if he plays h4, so he must keep his pawn on h3. Consider first the situation in which White's king is on f3 and Black's is on e5. Then White to play loses, because his only move is ♔e3, but then Black plays ...g5 followed by ...h5 and ...g4, deflecting the white king and winning. Now suppose Black is to play; then ...g5 is met by ♔g4 (verify this yourself; it's one line in which the a2-pawn proves its value), ...♔d4? by ♔f4 and ...h5? by h4 (White even wins in these last two cases). Black can of course just retreat his king, but this does

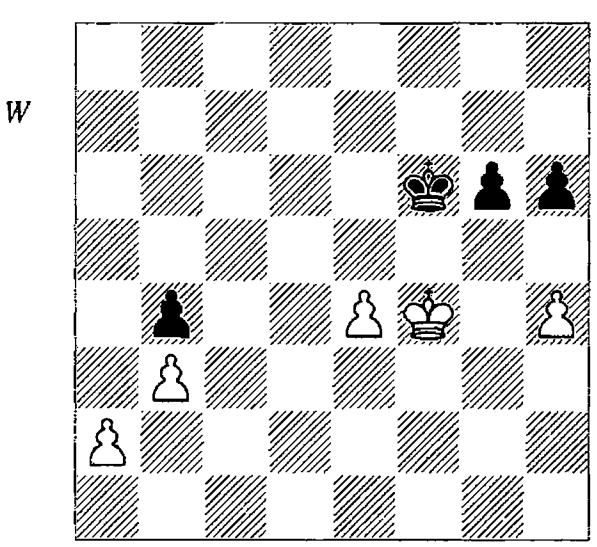
not improve his position. Thus ♔f3 vs ♔e5 is reciprocal zugzwang.

Now suppose we have ♔g4 vs ♔f6. If Black touches a pawn then he loses, while ...♔e5 is met by ♔f3 with the previous zugzwang. Thus if Black is to play, he has no effective move. But now suppose that White is to play (still with ♔g4 vs ♔f6). We already know that if Black manages to play ...g5 and ...h5 then he wins, so we can see that ♔g3 loses to ...g5 (threatening ...h5), and if then ♔g4 Black plays ...♔g6, again forcing through ...h5. In a similar way ♔f4 loses to ...g5+. Thus the only move that might be possible is ♔h4, but Black replies ...h5, meeting ♔g3 by ...g5 and e5+ by ...♔f5 (although ...♔xe5 also wins). Hence ♔g4 vs ♔f6 is reciprocal zugzwang. Now suppose that Black's king is on e6; then White must be ready to meet ...♔e5 by ♔f3 and ...♔f6 by ♔g4, so White's king must be adjacent to both f3 and g4. This leaves two possible squares f4 and g3, and indeed both of these are adequate for a draw.

2 h4?

This was the main line of Magerramov's analysis, but it loses. Based on the explanation above, we know that with Black's king on e6, White's must stand on f4 or g3. Since it is already on f4, there is only one move to draw: the remarkable and not at all obvious 2 ♔g3!!. It is interesting that this position proved too difficult for the players, both in the game and in Magerramov's home analysis.

2...♔f6 *(D)*



3 e5+

There is no longer any defence; for example, 3 ♔f3 ♔e5 4 ♔e3 g5 5 hxg5 hxg5 6 ♔f3 g4+ 7 ♔xg4 ♔xe4 and Black wins.

3...♔e6 4 ♔e4 g5 5 h5

5 hxg5 hxg5 6 ♔d4 g4 7 ♔e4 g3 8 ♔f3 ♔xe5 9 ♔xg3 ♔d4 is also decisive.

5...g4 6 ♔f4 g3 7 ♔xg3 ♔xe5 8 ♔f3

Or 8 ♔g4 ♔e4 9 ♔g3 ♔f5 and Black wins the h-pawn in any case.

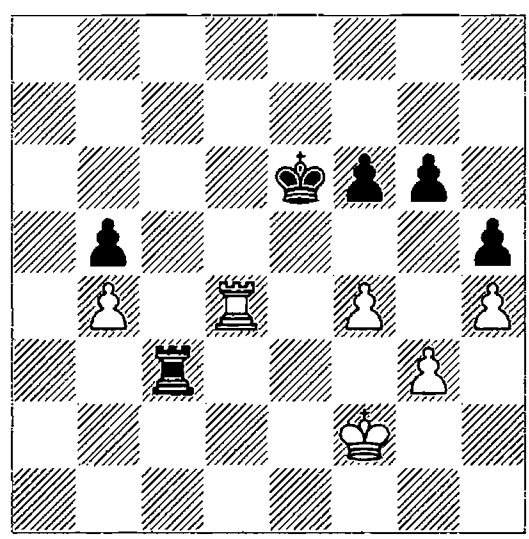
8...♔f5 9 ♔e3 ♔g5 10 ♔d3 ♔xh5 11 a4

After 11 ♔c4 ♔g5 12 ♔xb4 h5 Black promotes first.

11...bxa3 12 ♔c3 ♔g5 13 b4 ♔f5

and Black wins.

In the following example, corresponding squares are combined with two other themes that we shall examine in more detail later: breakthrough and the reserve tempo (in this case the move ...f5, which Black has to hold back in order to put White in zugzwang at a later stage). The breakthrough possibility constrains the movements of Black's king and allows White to draw, provided he plays correctly.



K. Berg – Hort
Biel 1985

White to play is nearly in zugzwang. If he moves his rook off the fourth rank and defends passively, then Black penetrates with his king via f5 and g4; for example, 1 ♖d2? ♖c4 2 ♖b2 ♔f5 3 ♖b3 ♔g4 4 ♔g2 f5 5 ♔h2 ♖c2+ 6 ♔g1 ♔h3 followed by ...♖g2+, winning. Nor can White offer the exchange of rooks by 1 ♖e4+? ♔f5 2 ♖e3 since 2...♖xe3 3 ♔xe3 ♔g4 4 ♔f2

♔h3 5 ♔f3 f5 6 ♔f2 ♔h2 7 ♔f3 ♔g1 is winning for Black.

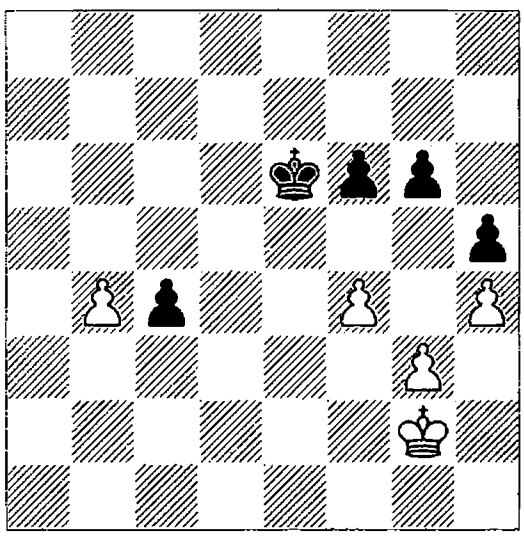
1 ♔g2!

Therefore this is the only move, aiming to head off the black king's penetration by playing ♔h3.

1...♖c4

The best practical chance, but against accurate defence it should not be enough to win. 1...♔f5 2 ♔h3 offers no winning chances at all.

2 ♖xc4 bxc4 *(D)*



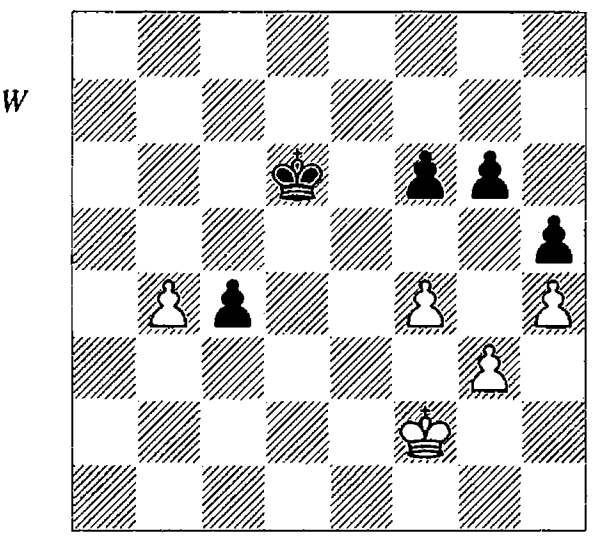
White's passed pawn is one file further 'outside' than Black's, but more important factors are that Black's pawn is further advanced, his king is better placed and he has a reserve tempo on the kingside. Thus Black is the one pressing for a win and it is White who must tread carefully.

3 ♔f2

At first sight Black wins easily by playing his king to b5, forcing White to reply ♔c3, and then using his reserve tempo ...f5 to win the b-pawn. However, matters are not so simple because when Black's king is far enough away, White can create a kingside passed pawn by playing g4 and f5. If we assume that Black's king is on c6, then for tactical reasons White's kingside breakthrough only works when his king is on e1 or e2 (for example, when the king is on e3, Black gains a vital tempo by playing ...f4+ at some point). Thus when Black's king is on d5 or d6, White's king must be on e1 or e2 in order to meet ...♔c6 by g4. Specifically, when Black's king is on d5, White's king must be on e2 (if it is on e1, then ...c3 followed by ...♔c4 wins). It follows that the position with ♔e2 vs ♔d5 is reciprocal zugzwang. Now suppose Black's king is on d6; then White's king must be on e1 (if it were on e2, then ...♔d5 would put White in zugzwang). Thus ♔e1 vs ♔d6 is also reciprocal zugzwang.

3...♔d6!? *(D)*

Black plays the trickiest continuation, testing whether White has really understood the position. 3...♔d5 is less of a test, since the correct reply is the obvious 4 ♔e2, which White might very well play whether he understands the position or not.



4 ♔e2?

White hasn't grasped the logic of the position and puts his king on the wrong square. 4 ♔e3? also loses after 4...♔c6! 5 g4 (5 ♔d4 ♔b5 6 ♔c3 f5 and Black wins) 5...hxg4 6 f5 gxf5 7 h5 f4+! 8 ♔e2 (8 ♔xf4 c3 9 ♔e3 g3 10 h6 c2 11 ♔d2 g2 12 h7 c1♕+ 13 ♔xc1 g1♕+ is also a win for Black) 8...c3 9 h6 f3+ 10 ♔f2 c2 11 h7 c1♕ 12 h8♕ ♕b2+ 13 ♔g3 ♕e5+ and Black wins easily with the two extra pawns.

The drawing line is 4 ♔e1!!, and now:

1) 4...♔d5 5 ♔e2 is the second reciprocal zugzwang; after 5...♔c6 (5...♔d4 6 ♔d2 is no better) 6 g4 hxg4 7 f5 gxf5 8 h5 c3 9 h6 c2 10 ♔d2 g3 11 h7 c1♕+ 12 ♔xc1 g2 13 h8♕ g1♕+ 14 ♔d2 ♕f2+ 15 ♔d3 Black's advantage is insufficient to win.

2) 4...♔c6 5 g4 (5 ♔d2? ♔b5 6 g4 hxg4 7 f5 g3 8 ♔e2 g2 9 ♔f2 c3 10 fxg6 c2 11 g7 c1♕ 12 g8♕ ♕f1+ wins for Black) 5...hxg4 6 f5 gxf5 7

h5 g3 8 h6 g2 9 ♔f2 c3 10 h7 c2 11 h8♕ g1♕+ 12 ♔xg1 c1♕+ 13 ♔f2 is also a draw.

4...♔d5!

4...♔c6? 5 g4 is a draw much as above, but the move played puts White in zugzwang.

5 g4

White tries the breakthrough in any case, but it doesn't work when Black's king is on the d-file. 5 ♔e3 ♔c6! transposes into the note to White's 4th move, while 5 ♔e1 c3 and 5 ♔d2 ♔c6 6 g4 hxg4 7 f5 g3 are also hopelessly lost for White.

5...hxg4 6 f5 g3! 7 fxg6 g2 8 ♔f2 ♔e6!

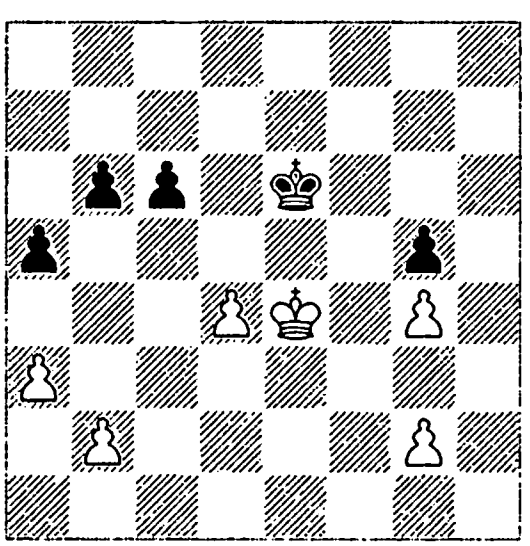
The point: when Black's king is on the d-file, it can simply stop the white pawns, after which the c-pawn proves decisive.

9 g7 ♔f7 0-1

10 b5 c3 11 b6 c2 12 b7 g1♕+ is hopeless for White.

Our final example combines some of the ideas we have seen earlier in this section. Here we have a corresponding square situation with mobile pawns, but in this case the attacker can win even though he initially does not hold the correspondence. The logic is similar to that in Tobak-Vasiliev on page 47: two adjacent light squares correspond to the same dark square, so White can win by playing his king to one square and then switching to the other.

W



Martinović – V. Raičević
Yugoslavia 1986

White is a pawn up, but his extra pawn is doubled and he has no immediate way to penetrate into Black's position. Two points operating in White's favour are that he has a reserve tempo on the kingside and that his extra doubled pawn will be useful if both sides promote. The position is winning for White, but he has to play with considerable subtlety to score the full point.

1 a4!

A strong move: before proceeding further, White plays to stabilize the queenside pawns. 1 b4? is wrong because after 1...a4! (1...axb4 2 axb4 b5 3 g3 ♔d6 4 ♔f5 ♔d5 5 ♔xg5 ♔xd4 6 ♔f6 c5 7 bxc5 ♔xc5 8 g5 b4 9 g6 b3 10 g7 b2 11 g8♕ b1♕ leads to a drawn queen and pawn vs queen position, but this would be difficult to defend in practice) 2 g3 b5 White has no way to penetrate with his king. However, 1 b3! b5 2 a4 is equally good, transposing to the game.

1...b5

Not 1...♔f6?! 2 d5 c5 3 ♔d3 heading for b5.

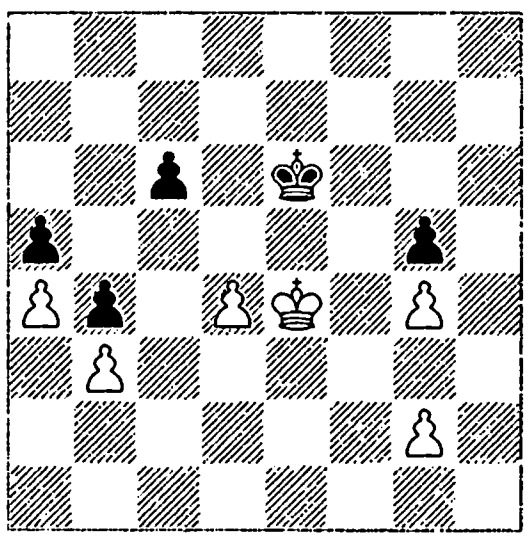
2 b3

2 axb5? cxb5 will give Black an outside passed pawn, which allows him to draw.

2...b4 *(D)*

The only chance, as 2...bxa4 3 bxa4 ♔d6 4 ♔f5 ♔d5 5 ♔xg5 ♔xd4 6 ♔f5 c5 7 g5 c4 8 g6 c3 9 g7 c2 10 g8♕ c1♕ 11 ♕d8+ leads to a queen exchange, after which the g-pawn proves decisive.

W



After the move played, we arrive at the key position. If it were Black to move, then he would lose because 1...♔d6 is met by 2 ♔f5 which, as we shall see in the game, leads to a winning queen ending, while after 1...♔f6 2 d5 c5 3 ♔d3 ♔e5 4 ♔c4 ♔d6 5 g3 White's reserve

tempo comes into play and he wins. The problem, therefore, is how to transfer the move to Black. To solve this, consider the situation with ♔d3 vs ♔d5; if Black is to play, he is in zugzwang, as after 1...♔e6 2 ♔c4 ♔d6 3 g3 White's king reaches c5, after which d5 wins easily. It also follows that White's king can never be allowed to reach c4, so Black must always be ready to meet ♔d3 by ...♔d5. He must also be prepared to answer ♔e4 with ...♔e6. Therefore when White's king is on e3, Black must be ready to move to d5 (after ♔d3) and e6 (after ♔e4); it follows that Black's king must be on d6. Now suppose that White's king is on d2. Black's king must be close enough to prevent White's king from arriving on c4, so it must be on d5, d6 or e6. However, if it is on d5, White can play ♔d3, while with the black king on d6, White can play ♔e3; by elimination Black's king must stand on e6. However, exactly the same logic applies when White's king is on e2, so both d2 and e2 correspond to e6. The solution is now clear: White must play his king to d2, forcing ...♔e6; then after ♔e2, Black is in zugzwang (White can also go to e2 and then d2). This is the logic behind the apparently paradoxical retreat of White's king that now follows.

3 ♔e3!

Not 3 g3? ♔f6 4 d5 c5 5 d6 (after 5 ♔d3? ♔e5 6 ♔c4 ♔d6 White even loses now that he does not have a reserve tempo) 5...♔e6 6 d7 ♔xd7 7 ♔d5 c4! 8 ♔xc4 ♔c6, when Black gains the opposition and draws.

3...♔d6

3...♔d5 loses more quickly after 4 ♔d3 ♔e6 5 ♔c4 ♔d6 6 g3 ♔d7 7 ♔c5 ♔c7 8 d5, etc.

4 ♔d2! ♔e6 5 ♔e2! *(D)*

Everything runs according to plan. Now Black has no good king move and must allow the white king to return to e4, having passed the move to Black.

5...♔d6

After 5...♔d5 6 ♔d3 Black loses as in the note to his third move.

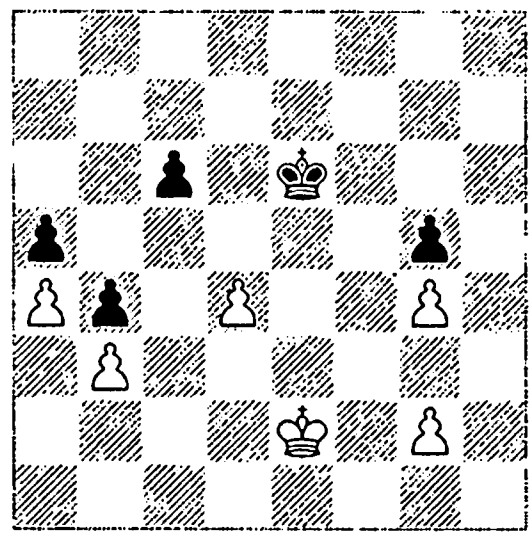
6 ♔e3 ♔e6 7 ♔e4

Black must give way.

7...♔d6

7...♔f6 8 d5 c5 9 ♔d3 ♔e5 10 ♔c4 ♔d6 11 g3 is decisive.

B

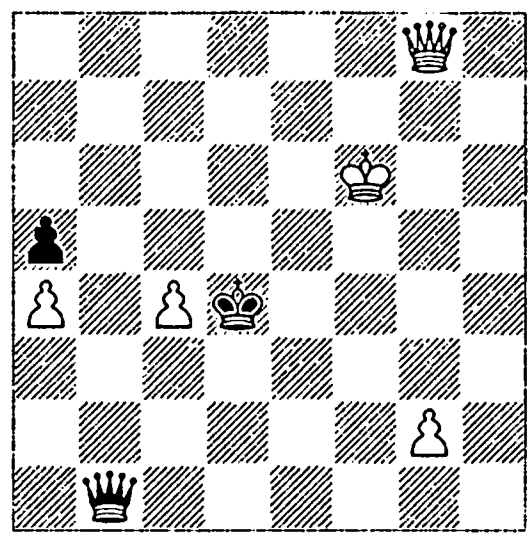


8 ♔f5 ♔d5 9 ♔xg5 ♔xd4 10 ♔f6!

This is by far the best square in the resulting queen ending as Black only has a few checks.

10...c5 11 g5 c4 12 bxc4 b3 13 g6 b2 14 g7 b1♕ 15 g8♕ *(D)*

B



White's two extra pawns are sufficient to win.

15...♕b4

The checks quickly run out after 15...♕b6+ 16 ♕e6 or 15...♕f1+ 16 ♔e7 ♕e2+ 17 ♔d8.

16 ♕d5+ 1-0

Rather an early resignation, perhaps, but the position is lost. One possible line runs 16...♔c3 17 c5 (the more cautious 17 ♕c6 is also good, defending all the pawns; if Black starts checking, White can eventually hide his king on a6) 17...♕xa4 18 c6 (the c-pawn is too strong) 18...♕f4+ 19 ♔e7 ♕c7+ (after 19...a4 20 ♕f3+ White wins at once) 20 ♔e6 ♕c8+ 21 ♕d7 ♕a6 22 ♔e7 ♕c4 23 ♕e6 ♕b4+ 24 ♕d6 ♕e4+ 25

♔d8 ♕h4+ 26 ♔c8 a4 27 c7 and the pawn will soon promote.

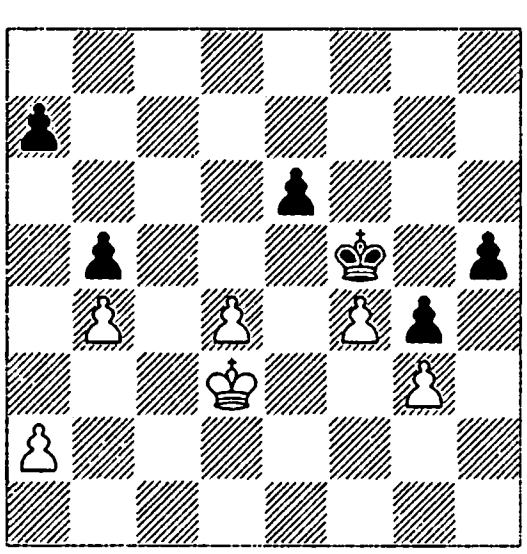
Summary:

- Pawn endings which involve corresponding squares arise occasionally in practice. Analysing them requires a novel type of chess thinking in which moves play little part.
- Even if the attacker doesn't initially hold the correspondence, he can sometimes gain it by manoeuvring with his king. This is possible if two adjacent squares for the attacker correspond to the same square for the defender.
- Mobile pawns increase the complexity of the analysis, but identifying the squares which correspond to one another is still the correct method of tackling the position.

2.3 Breakthrough

Passed pawns play a particularly important role in king and pawn endings, because if the enemy king is not close enough to stop a passed pawn, it can simply march forward to promotion. If the passed pawn is supported by its own king, then the pawn may promote even if the enemy king is nearby (although not if it is actually in front of the pawn). Thus the creation of a passed pawn may be worth the sacrifice of one or more pawns. We call this motif a *breakthrough*, and although it also occurs in other types of ending, it finds its clearest expression in king and pawn endings.

B



Yandemirov – Rublevsky
Russian Team Ch, Togliatti 2003

We'll start with a simple example, in which Black has the possibility of playing ...h4, creating a passed g-pawn. This breakthrough proves decisive, but only if Black follows up accurately; indeed, the success of the whole operation depends on a tactical point several moves down the road.

1...h4!

This is clearly the only winning chance, since otherwise Black must retreat his king.

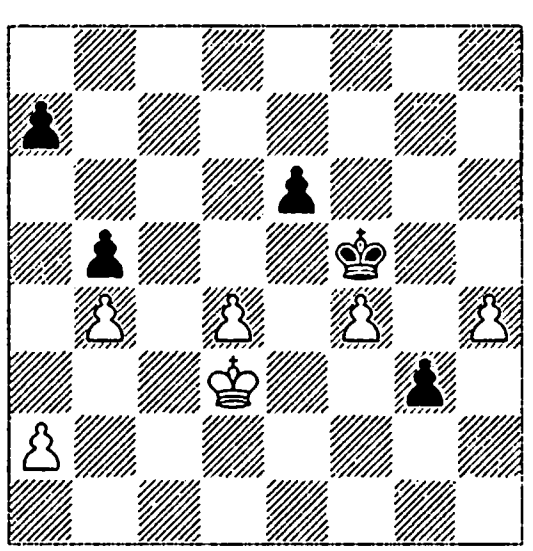
2 gxh4

The result is certainly not a foregone conclusion, as White has acquired a passed h-pawn.

2...g3! *(D)*

Not 2...♔xf4? 3 ♔e2 g3 (3...♔e4 4 ♔f2 ♔f4 is also a draw, and certainly not 4...♔xd4? in this line, because White even wins after 5 ♔g3) 4 h5 ♔g5 5 ♔f3 ♔xh5 6 ♔xg3 with a clear-cut draw.

W



3 ♔e3

The main line runs 3 ♔e2 ♔g4 4 h5 (4 ♔f1 ♔xh4 also wins for Black) 4...♔xh5 5 ♔f3 ♔h4 6 f5 (6 ♔g2 ♔g4 7 f5 ♔xf5 8 ♔xg3 ♔e4 and Black picks up the d-pawn) 6...♔h3! 7 fxe6 g2 8 e7 g1♕ 9 e8♕ ♕f1+, followed by ...♕e1+ winning White's queen. Black's whole plan depends on this tactical point.

3...♔g4

Now the g-pawn cannot be stopped.

4 f5 g2

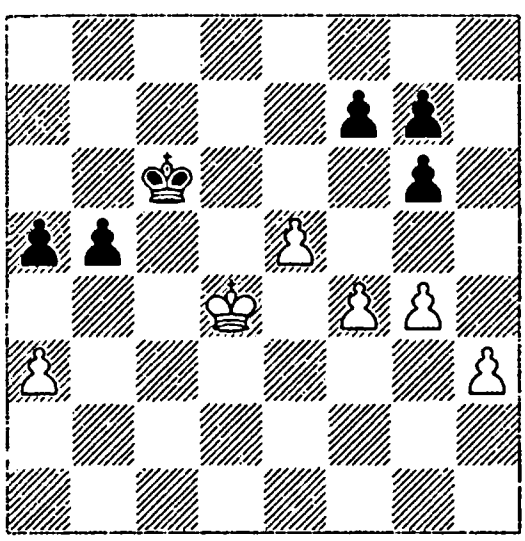
4...♔h3 also wins, as the g-pawn promotes with check.

5 ♔f2 ♔h3 6 fxe6

6 ♔g1 exf5 7 d5 ♔g3 8 d6 f4 9 d7 f3 10 d8♕ f2# is a neat finish.

6...♔h2 7 ♔f3 g1♕ 8 ♔e4 ♕e1+ 0-1

Most pawn breakthroughs are a bit more complicated than the previous example and involve a number of pawns working together to send one brave foot-soldier deep into enemy territory. Such situations can be confusing, even for strong grandmasters.



W

Mamedyarov – I. Sokolov
Hoogeveen 2006

Who is better in this position? At first glance, one might believe that Black is better, as he can create an outside passed pawn. However, thanks to Black's doubled pawns it is possible for White to create a passed pawn on the kingside and this prevents Black from playing ...♔d5-e4 after White's king has been deflected to the queenside. Thus Black's outside passed pawn has relatively little value and so White is the only one with winning chances. Indeed, if White continues correctly Black cannot avoid defeat, although in the game both sides made mistakes.

1 h4!

White must set his kingside pawns in motion and this is better than 1 g5? b4 2 axb4 axb4 3 ♔c4 (3 h4 is also a draw after 3...♔d7 4 ♔c4 ♔e6 5 ♔xb4 f6!) 3...b3 4 ♔xb3 ♔d5 5 h4 ♔e6 (not 5...♔e4? 6 h5 gxh5 7 g6 nor 5...♔c5? 6 f5! gxf5 7 h5 and White promotes in both cases) transposing into the game at move 5, by which time the position is drawn.

1...b4 2 axb4 axb4 3 ♔c4?

Letting Black off the hook. The b-pawn was not an immediate threat, so White should have used the tempo to improve his position on the kingside and prepare a breakthrough. 3 f5! would have been decisive; after 3...gxf5 4 gxf5 b3 5 ♔c3 ♔d5 6 e6 fxe6 7 f6 gxf6 8 h5 ♔e5 9 h6 or 3...b3 4 ♔c3 ♔d5 5 f6 gxf6 6 h5 ♔xe5 7 h6 the h-pawn promotes because the f6-square is blocked by an enemy pawn.

3...b3

Now it should be a draw.

4 ♔xb3 ♔d5

Black is threatening ...♔e4, so White must push his g-pawn.

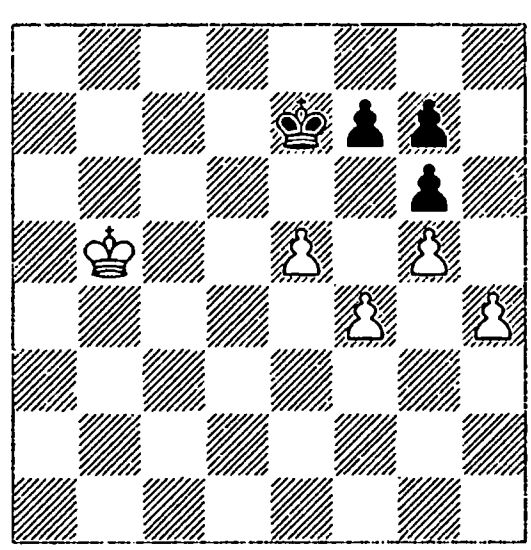
5 g5

5 h5 gxh5 6 gxh5 ♔e4 is an immediate draw.

5...♔e6

5...♔e4? loses to 6 h5 gxh5 7 g6, so Black's king must retreat. White then has time to bring his king up, but it turns out that his advantage is not enough to win.

6 ♔c4 ♔e7 7 ♔b5 *(D)*



B

7...f6?

Black loses patience and undertakes definite action himself, but this only weakens his position. He should have simply waited, when the draw is quite simple. He doesn't even have to take care to maintain the opposition, as White can't win even if his king reaches d6: 7...♔d7 8 ♔b6 ♔e7 9 ♔c6 ♔e6 (even 9...♔e8 10 ♔d6 ♔d8 draws; for example, 11 e6 fxe6 12 ♔xe6 ♔e8 13 f5 gxf5 14 ♔xf5 ♔f7 15 h5 g6+ 16 hxg6+ ♔g7) 10 ♔c5 (10 ♔c7 ♔e7 is also a draw) 10...♔e7 11 ♔d5 ♔d7 12 ♔d4 and now:

1) 12...♔e6? falls into a neat trap: 13 f5+! ♔xf5 (13...gxf5 14 h5 ♔e7 15 h6 gxh6 16 gxh6 ♔f8 17 ♔e3 ♔g8 18 ♔f4 ♔h7 19 ♔xf5 ♔xh6 20 ♔f6 is also winning for White) 14 ♔d5 ♔g4 15 ♔d6 ♔xh4 16 ♔e7 and the e-pawn will be decisive.

2) 12...♔e7! 13 ♔e3 ♔e6 (13...♔d7? 14 f5 gxf5 15 h5 and White promotes a pawn) 14 ♔e4 ♔e7 15 f5 gxf5+ 16 ♔xf5 g6+! 17 ♔f4 ♔e6 18 ♔e4 ♔e7 19 ♔d5 ♔d7 and Black draws.

8 gxf6+ gxf6 9 ♔c5

White moves across to defend the e-pawn. Black's active play has only served to give White a passed pawn that quickly proves decisive.

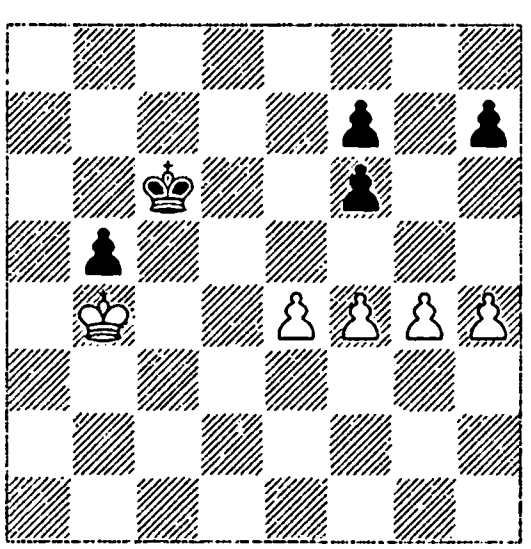
9...♔e6 10 ♔d4 ♔d7

10...f5 11 ♔c5 ♔e7 12 ♔d5 ♔d7 13 e6+ ♔e7 14 ♔e5 is also winning for White.

11 ♔d5 ♔e7 12 e6 ♔d8 13 ♔d6 ♔e8 14 e7 1-0

We shall consider outside passed pawns in more detail later in this book, but the situation we saw in the previous example of an outside passed pawn being impotent against a breakthrough on the opposite flank is not uncommon. Problems can arise for the side with the outside passed pawn if he has a weakened pawn-structure on the other side of the board, since this generally makes it easier for the opponent to create a passed pawn. In both the previous position and the following one this weakness is a doubled pawn.

B



Nakagawa – A. Day
Buenos Aires Olympiad (women) 1978

Here Black has the outside passed pawn, but White is the only one with winning chances. Black's broken kingside pawns are a weakness because White may be able to break through and create a passed pawn on the kingside. However, Black can draw if she chooses the correct plan.

1...h6?

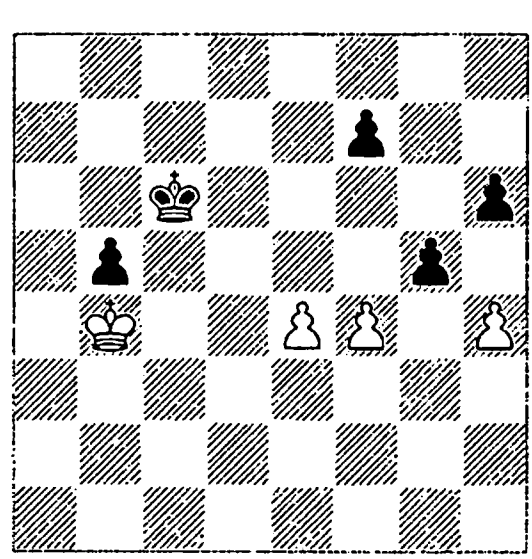
A mistake, as this doesn't really hold White up at all. Instead Black should have waited: 1...♔b6 2 h5 ♔c6 3 h6 ♔b6 4 e5 (or 4 f5 ♔c6 5 e5 ♔d5! and now it is time for White to force a draw by 6 ♔xb5 ♔xe5 7 ♔c5 ♔f4 8 ♔d6 ♔xg4 9 ♔e7 ♔xf5 10 ♔xf7 ♔g5 11 ♔g7 f5 12 ♔xh7 f4 13 ♔g7 as 6 exf6? would even lose after 6...♔e5 7 ♔xb5 ♔f4! 8 ♔c5 ♔xg4 9 ♔d6 ♔xf5 10 ♔e7 ♔g6) 4...fxe5 (but not 4...♔c6? 5 e6!, when 5...fxe6 6 g5 followed by g6 promotes, while after 5...♔d6 6 exf7 ♔e7 7 ♔xb5 ♔xf7 8 f5 White will win the f6-pawn) 5 f5 (5 fxe5 ♔c6 6 e6! ♔d6 7 exf7 ♔e7 8 ♔xb5 ♔xf7 9 ♔c5 ♔g6 10 ♔d4 is also a draw) 5...e4! 6 ♔c3 (not 6 g5? e3 7 ♔c3 b4+! 8 ♔d3 b3 and Black wins) 6...♔c5 7 g5 b4+ 8 ♔d2 b3 9 g6 fxg6 10 fxg6 hxg6 11 h7 e3+ 12 ♔xe3 b2 13 h8♕ b1♕ 14 ♕e5+ and the result is a draw.

2 g5?

Missing a simple win by 2 h5! ♔b6 (2...♔d6 3 ♔xb5 ♔e7 4 ♔c5 is hopeless for Black) 3 g5 and the h-pawn will promote. According to Minev, the text-move even loses, but this is not the case.

2...fxg5 *(D)*

W



3 fxg5?

Now, however, White is doomed. She could still have drawn by 3 hxg5! h5 (3...hxg5 4 fxg5 ♔d6 5 ♔xb5 ♔e5 6 ♔c5 ♔xe4 7 ♔d6 is also a draw) 4 f5 ♔d7 5 g6 fxg6 6 fxg6 ♔e6 7 e5 h4 8 g7 ♔f7 9 ♔c5! h3 10 e6+ ♔xg7 11 ♔d6 h2 12 e7 h1♕ 13 e8♕ and the ♕+♙ vs ♕ ending is an easy draw since White's king is well posted to attack the enemy pawn directly.

3...h5

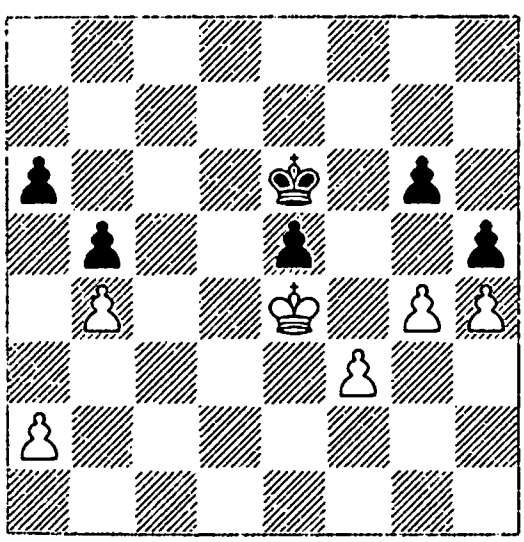
Now we have a traditional outside passed pawn situation and Black wins comfortably.

4 e5 ♔d5 5 ♔xb5 ♔xe5 6 ♔c6 ♔f5 7 ♔d5 ♔g4 8 ♔e5 ♔xh4 9 ♔f5

9 ♔f4 ♔h3 10 ♔f3 h4 is also a win for Black.

9...♔g3 10 ♔f6 ♔g4 0-1

One rather common type of breakthrough involves four pawns forming a square. We shall meet this several times in the following positions, so it deserves a special name: the *square breakthrough*. Here is a simple example.



Barrera – Schaetzle
Argentina 1975

1...g5!

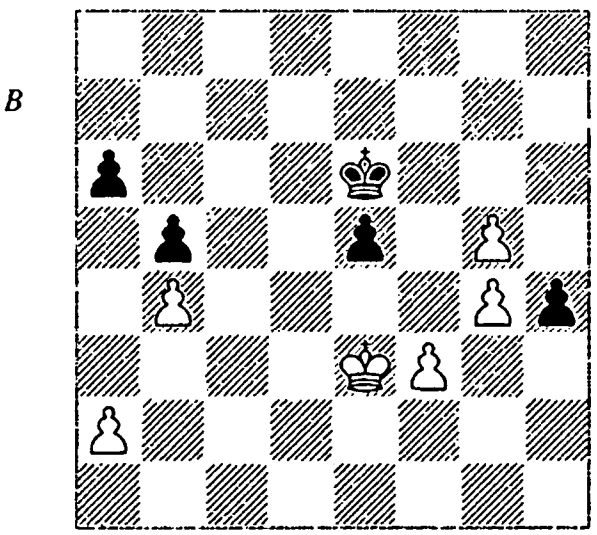
The square breakthrough secures a passed h-pawn and gives Black a decisive advantage. Finding it was probably made easier by the fact that every other move loses straight away; for example, 1...♔f6? 2 ♔d5, 1...hxg4? 2 fxg4 followed by h5, or 1...♔d6? 2 gxh5 gxh5 3 f4 exf4 4 ♔xf4 ♔d5 5 ♔g5 ♔c4 6 a3 and White's h-pawn is too quick.

2 hxg5

The only chance, since 2 gxh5 gxh4 3 h6 ♔f7 4 f4 h3 5 ♔f3 exf4 is an easy win for Black.

2...h4 3 ♔e3 *(D)*

Again the only move, since after 3 f4 h3 4 f5+ ♔e7 5 ♔f3 e4+ 6 ♔g3 e3 Black forces one of the pawns home.



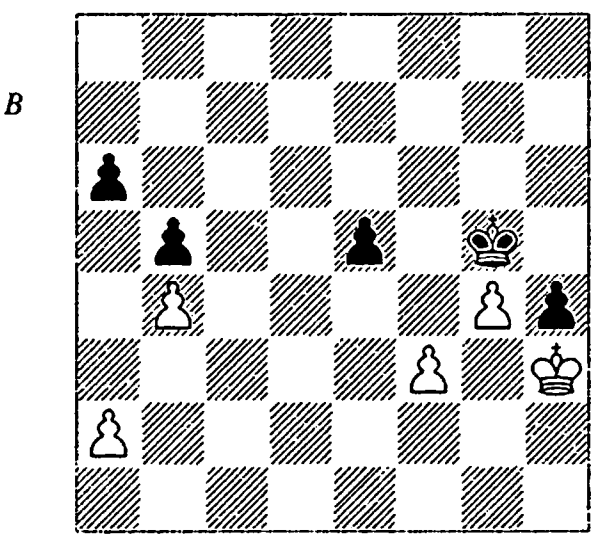
3...♔f7

Now Black heads off to win the g5-pawn, after which the outside passed h-pawn and possibility of breaking up White's pawns by ...e4 prove decisive.

4 ♔f2 ♔g6 5 ♔g2 ♔xg5

Threatening to win with ...e4, so the reply is forced.

6 ♔h3 *(D)*



6...♔f4 7 ♔xh4

After 7 ♔g2 e4! 8 fxe4 ♔xg4 Black wins trivially, while 7 a3 loses to the neat switchback

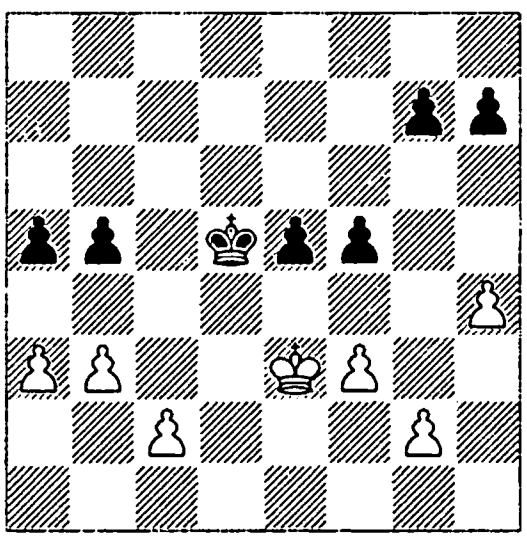
7...♔g5!, forcing the white king to move, after which ...e4 is decisive.

7...♔xf3 0-1

Black wins after 8 g5 e4 9 g6 e3 10 g7 e2 11 g8♕ e1♕+ 12 ♔h5 ♕h1+ 13 ♔g6 ♕g1+ 14 ♔f7 ♕xg8+ 15 ♔xg8 ♔e4 16 ♔f7 ♔d5.

It's surprising how often players overlook the square breakthrough. In the next example, one of the world's top players missed a chance to draw and instead was forced to resign in one move.

B



Adams – Lutz
Wijk aan Zee (rapid) 1995

Even at a glance it is obvious that Black has the advantage because his king is more actively placed and he controls more space. White has a queenside majority and Black has a kingside majority, so there isn't really an 'outside passed pawn' here, although one might develop as play proceeds. What is clear, however, is that Black can use his majority to create a passed pawn any time he chooses by playing ...e4, whereas White cannot so easily play c4 to create his own passed pawn. To force through c4 he would have to play ♔d3, but then Black can reply ...e4+ and White will still have trouble pushing his c-pawn. There is the additional danger that Black might play ...b4 at some point, which under the right circumstances could cripple White's queenside pawns. All these generalizations help to focus our attention on the important points and help to decide how Black should continue. The most obvious move is 1...e4! and this is sufficient to win. Another strong move is 1...h5!, which gains some more space, stops any action with g4 and keeps the tempo ...g6 in reserve. In the game Black decided on a third move, which turned out to be a mistake allowing White to draw.

1...a4?

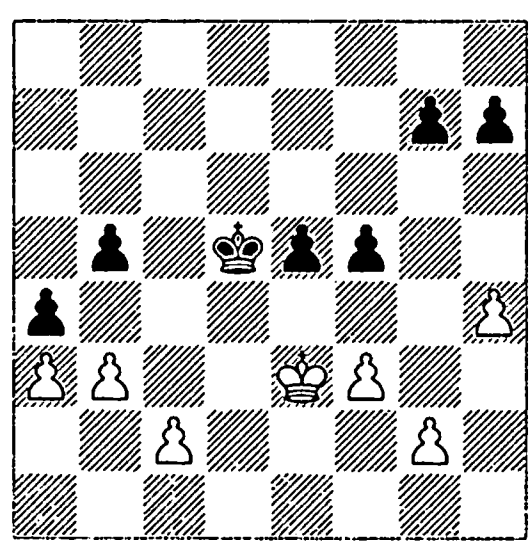
This threatens to win at once with the square breakthrough ...b4, but it allows White to create a passed pawn straight away. 1...b4? is also wrong as 2 axb4 axb4 3 c3! bxc3 4 ♔d3 gives White an outside passed pawn and after 4...c2 5 ♔xc2 ♔d4 6 ♔d2 g6 7 ♔c2 ♔e3 8 b4 ♔d4 9 ♔b3 a draw is the most likely result.

1...h5! is a straightforward win because White has very few possibilities: 2 ♔d3 e4+ 3 fxe4+ (3 ♔d2 ♔d4 4 c3+ ♔d5 5 ♔e3 a4 gives the black king access to c4 and wins) 3...fxe4+ 4 ♔e3 b4 5 a4 ♔e5 and the black king penetrates to d4 and then c3, with an easy win.

1...e4! is slightly more complicated, but also effective: 2 g4 (2 f4 b4) 2...exf3 3 gxf5 ♔e5 4 ♔xf3 (4 c3 ♔xf5 5 ♔xf3 g5 6 h5 h6 7 ♔e3 ♔e5 8 c4 bxc4 9 bxc4 a4 and 4 c4 bxc4 5 bxc4 ♔xf5 6 ♔xf3 g5 7 h5 h6 are winning for Black thanks to his outside protected passed pawn) 4...♔xf5 5 ♔e3 ♔e5! (5...g5? falls into a nasty trap: 6 hxg5 ♔xg5 7 c4 bxc4 8 b4! axb4 9 a4! and it's about time for Black to force a draw by 9...b3 10 ♔d2 b2 11 ♔c2 c3 12 a5 ♔f4 13 a6 ♔e3 14 a7 b1♕+ 15 ♔xb1 ♔d2) 6 h5 (6 ♔d3 ♔d5) 6...♔d5 7 ♔d3 a4! 8 bxa4 bxa4 9 c3 ♔c5 10 c4 g5 11 ♔c3 h6 12 ♔d3 g4 and Black wins.

We now return to the position arising after 1...a4? *(D)*:

W



2 h5??

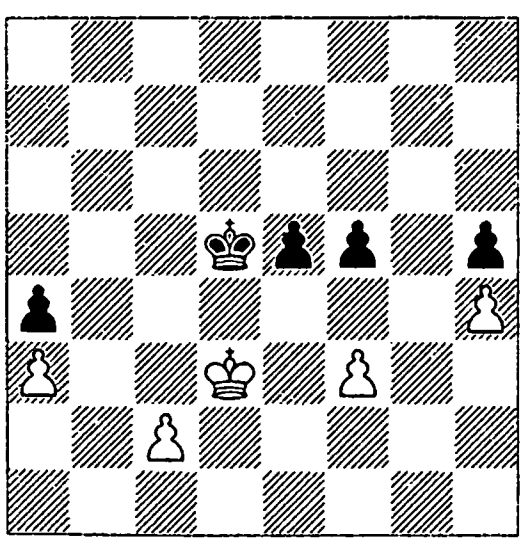
White misses his drawing opportunity and blunders, losing at once. The drawing line was 2 bxa4 (2 b4? ♔c4 3 ♔d2 e4 and 2 c4+? ♔c5! 3 bxa4 bxa4 4 ♔d3 e4+ are disastrous for White) 2...bxa4 3 g4! (the key move, gaining space on the kingside and preventing a lockdown by ...h5; instead 3 ♔d3? loses to 3...h5! 4 g3 g6 5 c3 e4+ 6 fxe4+ fxe4+ 7 ♔e3 ♔c4 8 ♔xe4 ♔xc3 9 ♔f4 ♔b3 10 ♔g5 ♔xa3 11 ♔xg6 ♔b3) and now:

1) 3...fxg4 4 fxg4 e4 (4...♔c4 5 ♔e4 ♔c3 6 ♔xe5 ♔xc2 7 ♔e6 ♔b3 8 ♔f7 ♔xa3 9 ♔xg7 ♔b4 10 ♔xh7 a3 11 g5 a2 12 g6 a1♕ 13 g7 ♕b1+ 14 ♔h8! ♕b2 15 h5 is also a draw) 5 h5! h6 6 c3! ♔c4 7 ♔xe4 ♔xc3 8 ♔f5 ♔b2 9 ♔g6 ♔xa3 10 ♔xg7 ♔b3 11 ♔xh6 a3 12 g5 a2 13 g6 a1♕ 14 g7 (14 ♔h7 also draws) 14...♕f6+ 15 ♔h7 ♕f5+ 16 ♔h6! ♕g4 17 g8♕+ ♕xg8 stalemate.

2) 3...g6!? with another branch:

2a) 4 gxf5? gxf5 5 ♔d3 is given by Lutz as drawing, but Black wins by 5...h5! *(D)*:

W



2a1) 6 ♔c3 e4 7 fxe4+ ♔xe4! 8 ♔d2 ♔d4 and Black wins.

2a2) 6 ♔e3 ♔c4 7 ♔d2 ♔d4 8 ♔e2 (8 c3+ also loses after 8...♔c4 9 ♔c2 f4) 8...e4 9 fxe4 ♔xe4 with a decisive advantage for Black.

2a3) 6 c3 ♔c6! (6...♔c5? 7 c4 leaves Black on the wrong end of a reciprocal zugzwang; after 7...e4+ 8 fxe4 fxe4+ 9 ♔xe4 ♔xc4 10 ♔e3 ♔b3 11 ♔d3 ♔xa3 12 ♔c3 it's a draw) 7 ♔d2 (7 c4 ♔c5 8 ♔c3 e4 and Black wins easily) 7...♔c5 8 ♔d3 ♔d5 and this is another reciprocal zugzwang. Here White is to play and Black wins following 9 c4+ ♔c5 10 ♔c3 e4.

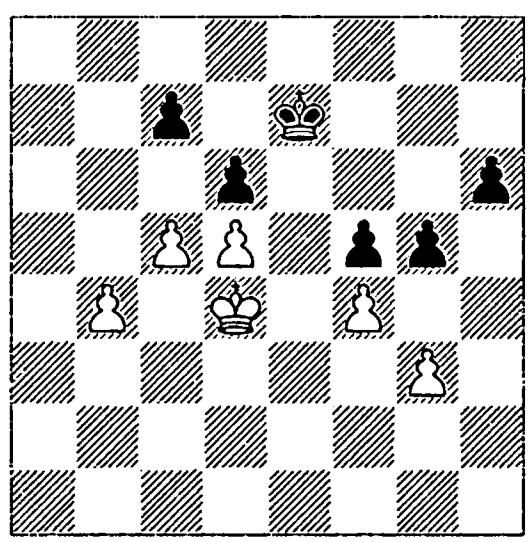
2b) 4 ♔d3! (the only move to draw) 4...♔c5 (4...h5 5 g5 ♔c5 6 c4 leaves Black in zugzwang) 5 gxf5 gxf5 6 h5 h6 7 c4 and again Black cannot win if it is his turn to move.

2...b4! 0-1

The square breakthrough guarantees the promotion of a black pawn.

Even when the square breakthrough doesn't lead to the immediate promotion of a pawn, the creation of a passed pawn can prove too much for the defender, especially if he has to cope with pressure on another part of the board.

W



G. Camacho – A.C. Hernandez
Cuba 1995

The position looks like a draw in view of the equal material and lack of possibilities for White to penetrate with his king, but White found a remarkable winning idea based on the creation of two passed pawns, with one of them arising from a square breakthrough.

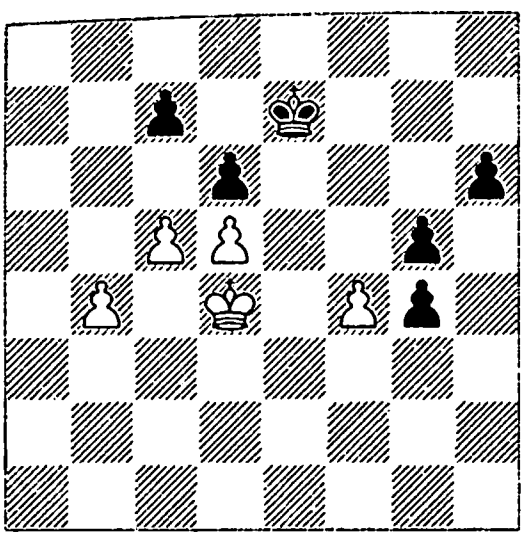
1 g4!!

This is really a surprising move, offering a pawn and allowing Black to create three passed pawns on the kingside. However, these pawns are all in a bunch so can be stopped by the white king, whereas White will have a passed f-pawn and the possibility of creating a passed c-pawn in a few moves. In view of the distance between the c- and f-pawns, Black will be unable to stop both with his king.

1...fxg4 *(D)*

The only move, as 1...gxf4 2 gxf5 ♔f6 3 cxd6 cxd6 4 b5 ♔xf5 5 b6 is an easy win for White.

W



2 f5

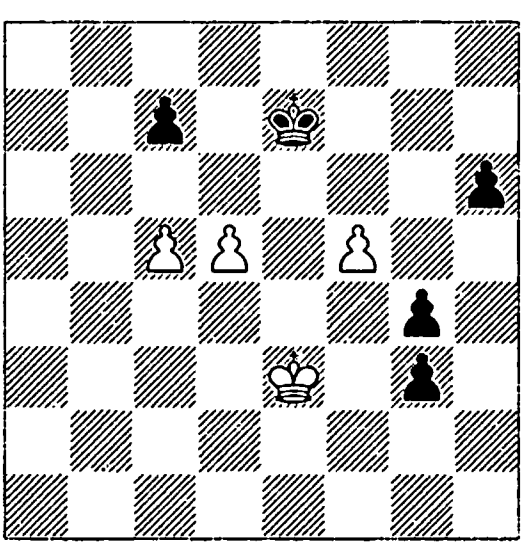
The only consistent follow-up to the previous move. 2 fxg5? dxc5+ 3 bxc5 hxg5 4 ♔e3 leads to a draw.

2...dxc5+

2...♔f6 loses at once to 3 cxd6 cxd6 4 b5, while 2...g3 3 ♔e3 g4 4 c6! h5 5 b5 h4 6 ♔e2! h3 7 ♔f1 is also winning for White because Black's pawns are stopped, whereas after the coming b6 White's pawns cannot be halted.

3 bxc5 g3 4 ♔e3 g4 *(D)*

W



5 c6!

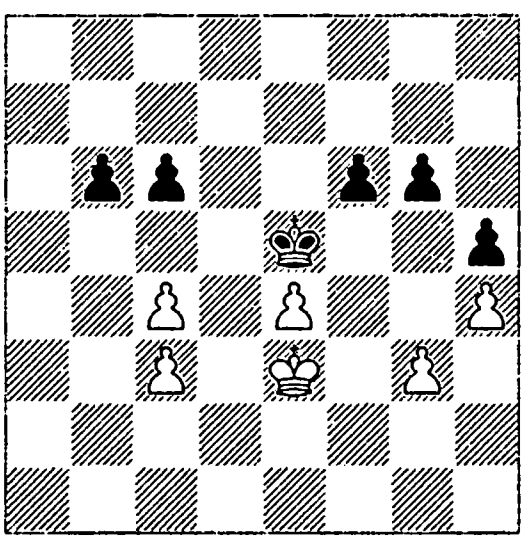
It's still possible to go wrong. 5 d6+? cxd6 6 c6 is premature since Black saves himself using the passed d-pawn: 6...d5! 7 c7 ♔d7 8 f6 d4+ 9 ♔e2 d3+ 10 ♔xd3 g2 with a draw. By playing c6 first, White delays the creation of a black passed d-pawn by a move, which effectively snuffs out any possible counterplay.

5...h5 6 f6+ ♔xf6 7 d6 1-0

White's pawns have been real heroes: three have sacrificed themselves so that the c-pawn can make it to the eighth rank.

The following position is more complex, as it combines corresponding squares with the possibility of a square breakthrough.

B



Ju. Koch – De Dovitiis
Argentina 2005

White clearly stands worse here since although material is equal, he has a miscellany of weak pawns. However, Black has no straightforward way to exploit these and must manoeuvre with his king in order to try to make progress. Black won the game, and the notes by De Dovitiis in *Informator 95* wrongly claimed that the diagram position is winning for Black. If White understands the system of corresponding squares, he can match Black's king manoeuvres and draw.

1...♔d6!?

This is certainly Black's best chance. Other moves offer fewer chances and indeed one plausible move even loses:

1) 1...g5?? looks natural, but actually costs Black the game after the square breakthrough 2 g4! hxg4 (2...gxh4 3 gxh5 h3 should be met by 4 ♔f2! f5 5 h6 ♔f6 6 e5+ ♔g6 7 e6 promoting a pawn, but not 4 ♔f3? f5 5 h6 fxe4+ 6 ♔g3 ♔f6

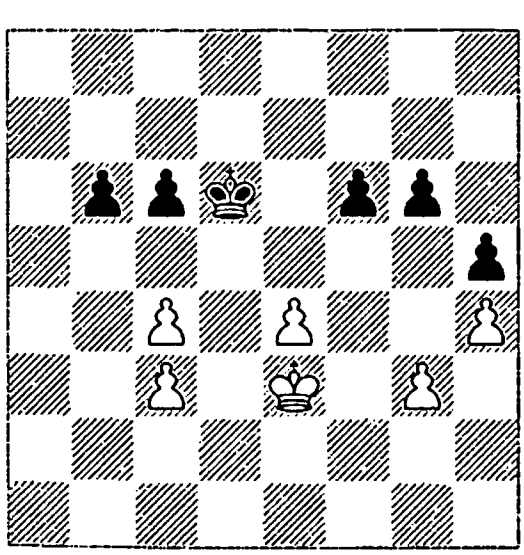
7 ♔xh3 ♔g6 8 ♔g4 ♔xh6 9 ♔f4 ♔g6 10 ♔xe4 ♔f6 and Black draws) 3 h5 ♔e6 (3...f5 4 h6 f4+ 5 ♔f2 ♔f6 6 e5+ and White wins) 4 ♔f2 ♔f7 5 ♔g3 ♔g7 6 ♔xg4 ♔h6 and now:

1a) 7 ♔f5? ♔xh5 8 ♔xf6 g4 9 e5 g3 10 e6 g2 11 e7 g1♕ 12 e8♕+ ♔h4 13 ♕h8+ (13 ♕e4+ ♔h3 14 ♔e6 may be a better practical chance, but it should still be a draw; in any case, the key point is that swapping queens doesn't win here) 13...♔g3 14 ♕g7+ ♔f2 15 ♕xg1+ ♔xg1 16 ♔e5 ♔f2 17 ♔d6 ♔e3 is only a draw.

1b) 7 c5! (White must improve the pawn position on the queenside before he heads for a queen ending) 7...b5 (7...bxc5 8 c4 puts Black in zugzwang and wins after 8...♔g7 9 e5! fxe5 10 ♔xg5) 8 ♔f5! (now this wins) 8...♔xh5 9 ♔xf6 g4 10 e5 g3 11 e6 g2 12 e7 g1♕ 13 e8♕+ ♔h4 14 ♕h8+ ♔g3 15 ♕g7+ ♔f2 16 ♕xg1+ ♔xg1 17 ♔e5 (the insertion of c5 and ...b5 makes all the difference) 17...♔f2 18 ♔d6 and White wins.

2) 1...♔e6 allows White to draw by 2 ♔f2, as in the analysis below, but he has a second, more forceful method: 2 c5! bxc5 (2...b5 3 ♔f4 ♔e7 4 e5 is also an easy draw) 3 c4 ♔e5 4 ♔d3 g5 5 ♔e3 and Black cannot make progress.

We now return to 1...♔d6!? *(D)*:



W

2 ♔d4?

This is the losing move. In order to understand a position such as this, it is necessary to think logically. We have already seen that with ♔e3 vs ♔e5, Black cannot make immediate progress because ...g5 is impossible. However, if White were to move then he would lose straight away. He must play ♔d3 or ♔f3, but in both cases Black wins by ...g5. Then the reply g4 is impossible (because when the king is on f3, ...hxg4+ followed by ...gxh4 wins, while with the king on d3 simply ...gxh4 is decisive), so in either case White must meet ...g5 with ♔e3, but then ...gxh4 followed by ...f5 wins, because Black still has a reserve tempo on the queenside. Thus ♔e3 vs ♔e5 is zugzwang. Now suppose Black's king is on d6. There is the possibility of ...♔c5, so White's king must be near enough to defend c4; this limits the possibilities to d3, d2 and e2. With the king on d3, ...♔c5 wins at once, while with the king on d2 Black again wins by ...g5, since g4 can once more be answered with ...gxh4 and the white king is too far away. Thus when Black's king is on d6, White's king must be on e2, since here he can successfully meet ...g5 by g4.

Now suppose that Black's king is on e6; White must be prepared to meet ♔e3 by ...♔e5 and ...♔d6 by ♔e2, so White's king must be adjacent to e2 and e3. We have already seen that with the king on the d-file, Black wins with ...g5 because the king is too far away to reply g4; therefore White's king must be on f2 or f3. However, the king on f3 runs into a problem we have seen before: after ...g5 White cannot play g4 because ...hxg4+ is check. Therefore with the king on e6, White's king must be on f2.

It follows from this logic that the drawing line is 2 ♔e2! ♔e6 (2...g5? loses to 3 g4) 3 ♔f2! (3 ♔e3? ♔e5 4 ♔f3 g5 and 3 ♔f3? g5 4 ♔f2 gxh4 5 gxh4 ♔e5 6 ♔e3 c5 7 ♔f3 f5 8 exf5 ♔xf5 are both winning for Black) 3...♔e7 4 ♔e3 and Black cannot make progress. White is always able to meet ...g5 by g4, and if Black manoeuvres with his king, White can always match Black's moves.

The move played loses because White's king is too far away from the h-file, and so he cannot answer ...g5 with g4.

2...g5! 3 c5+

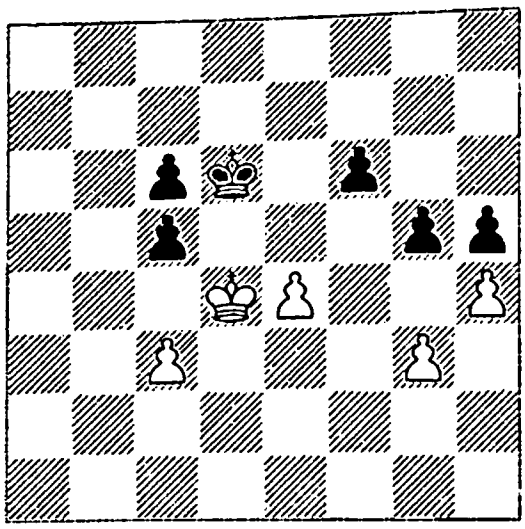
3 g4 gxh4 and 3 ♔e3 gxh4 4 gxh4 ♔e5 5 c5 b5 6 ♔f3 f5 7 exf5 ♔xf5 also win for Black.

3...bxc5+ *(D)*

4 ♔d3

Or 4 ♔c4 ♔e5 5 ♔xc5 gxh4 6 gxh4 ♔xe4 7 ♔xc6 f5 and Black's pawn is too fast.

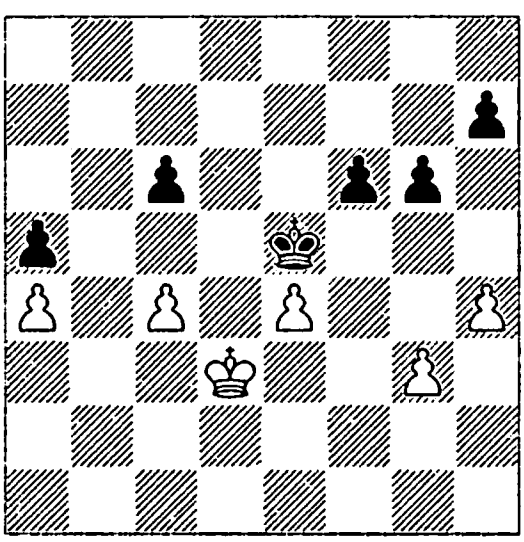
W



4...♔e5 5 ♔c4 gxh4 6 gxh4 ♔xe4 7 ♔xc5 f5 0-1

The next position bears some similarity to the previous example, although the play is slightly less complex. Black outrated White by more than 300 Elo points, but this did not insure him against defeat when he overlooked a square breakthrough.

B



S. Simić – P. Nikolić
Vršac 1981

This ending resembles that of Koch-De Dovitiis, although there are some differences in the queenside pawn-structure. White's structure is inferior to Black's as he has an isolated pawn in the centre of the board which allows Black's king to occupy a relatively active square on e5. Whether an advantage such as this is sufficient to win cannot be determined by general principles and can only be resolved by concrete analysis; often apparently insignificant factors can play an important role. In this case Black's advantage is not enough to win if White defends correctly. In such a position it is easy for Black to imagine that there are only two possible results (a draw or a win for him), which can blunt his sense of danger and lead to disastrous consequences.

1...c5

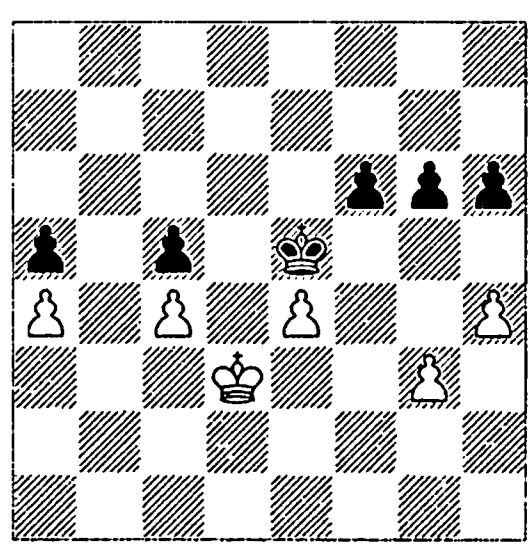
Other moves also fail to win; for example, 1...♔d6 2 ♔d4 (after 2 g4? g5 Black wins; for example, 3 h5 ♔c5 4 ♔c3 h6 or 3 hxg5 fxg5 4 ♔e3 ♔e5 5 c5 h6 6 ♔d3 ♔f4 7 ♔d4 ♔xg4 8 ♔e5 h5 9 ♔d6 h4 10 e5 h3 11 e6 h2 12 e7 h1♕ 13 e8♕ ♕d5+ 14 ♔c7 ♕xc5 with two extra pawns in the queen ending) 2...h6 (2...c5+ 3 ♔d3 ♔e5 4 ♔e3 transposes to the game) 3 c5+! (3 g4? c5+ 4 ♔d3 ♔e5 5 ♔e3 h5 6 gxh5 gxh5 7 ♔f3 ♔d4 wins for Black) 3...♔e6 4 g4! h5 5 gxh5 gxh5 6 ♔d3! ♔e5 7 ♔e3 f5 8 exf5 ♔xf5 9 ♔f3 ♔e5 10 ♔e3 ♔d5 11 ♔f4 ♔xc5 12 ♔g5 ♔b4 13 ♔xh5 c5 14 ♔g4 c4 15 h5 c3 16 h6 c2 17 h7 c1♕ 18 h8♕ and Black cannot do more than reach a drawn ending of ♕+a♙ vs ♕.

2 ♔e3 h6

2...h5 3 ♔d3 is similar.

3 ♔d3 *(D)*

B



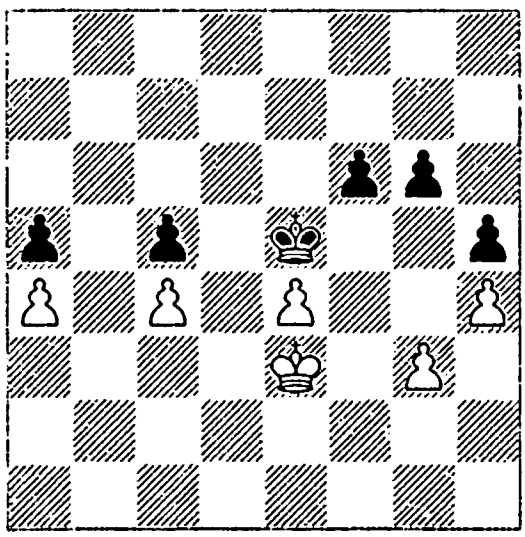
3...h5?!

After this even the possibility of playing for a win vanishes. Black should have tried 3...f5 4 exf5 ♔xf5 5 ♔e3 ♔g4 6 ♔e4 (not 6 ♔f2? ♔h3 7 ♔f3 g5 and Black wins) 6...♔xg3 7 ♔d5 ♔xh4 8 ♔xc5 g5 9 ♔b5 g4 10 c5 g3 11 c6 g2 12 c7 g1♕ 13 c8♕ ♕g5+ 14 ♔b6, but although

Black is a pawn up in the queen ending, his winning chances are minimal.

4 ♔e3 *(D)*

B



4...g5?

A blunder giving White a winning position. Instead 4...f5 or 4...♔e6, for example, would have held the draw easily. This blunder is all the more strange in that if White did not now have g4 he could resign, so what did Black expect White to play?

5 g4!

This nasty trick gives White a passed h-pawn, which is especially powerful as the pawn on f6 obstructs the black king's return.

5...f5

The main line runs 5...hxg4 6 h5 ♔e6 (or 6...f5 7 h6 f4+ 8 ♔d3 ♔f6 9 e5+ ♔g6 10 e6 g3 11 e7 and White wins) 7 ♔f2 ♔f7 8 ♔g3 ♔g7 9 ♔xg4 ♔h6 10 ♔f5 ♔xh5 11 ♔xf6 g4 12 e5 g3 13 e6 g2 14 e7 g1♕ 15 e8♕+ (White can force the exchange of queens) 15...♔h4 16 ♕h8+ ♔g3 17 ♕g7+ ♔f2 18 ♕xg1+ ♔xg1 19 ♔e5 and Black's pawns fall.

6 gxh5 f4+ 7 ♔f2 1-0

White wins after 7...gxh4 8 h6 ♔f6 9 e5+ and a pawn promotes.

Summary:

- A breakthrough is a method of creating a dangerous passed pawn by sacrificing one or more pawns. In some cases the passed pawn may be impossible to stop, while in others it draws the defender's king out of position and allows the attacker's king to penetrate.
- The *square breakthrough* is one of the most common types of breakthrough, and it is often overlooked in practice.
- The possibility of a breakthrough may restrict the movements of the enemy king, and this may nullify other advantages, such as an outside passed pawn.

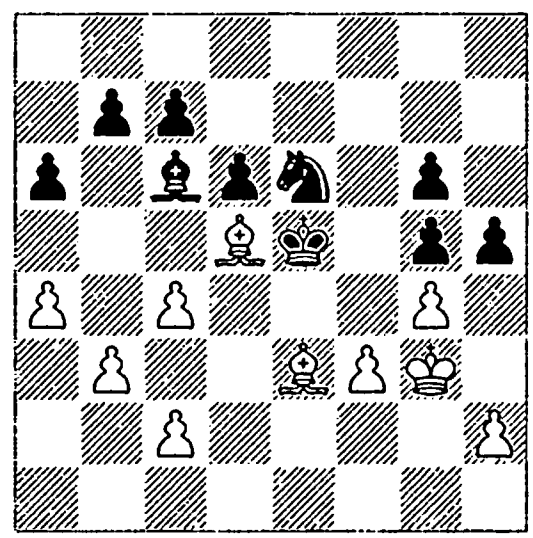
2.4 King Position Ideas

If the king is your only piece, then its activity has a profound effect on the position, and can determine the result of the game independent of other factors. First we shall look at cases in which one player is doomed by his poor king position.

2.4.1 King Trapped at the Edge of the Board

If your king is trapped on the edge of the board, it not only displays little activity itself, but can adversely affect the rest of your position. For example, the king may be in front of a passed pawn which cannot then advance, or if both sides promote, the king may be vulnerable to mating possibilities. In our first example, one of the world's top players incorrectly assesses a liquidation to a pawn ending and ends up with his king totally paralysed.

W



Ivanchuk – Wang Yue
Sofia 2009

White had been playing to exploit his two bishops for a long time and now spotted the

opportunity to strike with a ♗xg5 and f4+ combination. Unfortunately, the way in which he chose to execute this idea not only failed to offer any winning chances, but even led to a king and pawn ending which was lost for him. Had White executed the idea accurately, then he could have put Black under pressure, but with correct play the game would have been a draw.

1 ♗xg5??

A losing move. The critical continuation runs 1 gxh5 gxh5 2 ♗xc6 bxc6 3 b4 (3 ♗xg5 can be safely met by either 3...♘xg5 4 f4+ ♔f5 5 fxg5 ♔xg5 6 b4 d5, transposing into the main line of this note, or simply 3...♘d4) 3...d5 (Black must take action, or White will improve his position by playing a5, with the possibility of a breakthrough by b5) 4 ♗xg5 (4 cxd5 cxd5 5 ♗xg5 will transpose) 4...♘xg5 5 f4+ ♔f5 6 fxg5 ♔xg5 7 cxd5 (7 b5 cxb5 8 cxb5 a5 is also drawn) 7...cxd5 8 a5 c6 9 c3 ♔f5 10 ♔f3 ♔e5 11 ♔e3 h4 (11...♔d6? 12 ♔d4 h4 13 h3 ♔d7 14 ♔e5 ♔e7 15 ♔f5 is a win for White, but 11...d4+! 12 cxd4+ ♔d5 also draws, much as in the main line of this note) 12 h3 (12 ♔f3 h3 13 ♔e3 d4+ is effectively the same) 12...d4+! (Black sacrifices a pawn to weaken White's queenside pawn-structure and give his king more space; other moves lose, for example 12...♔d6? 13 ♔d4 ♔d7 14 ♔e5, etc.) 13 cxd4+ ♔d5 14 ♔d3 ♔e6! (not 14...♔d6? 15 ♔c4 and it is Black to play in a reciprocal zugzwang) 15 ♔c4 ♔d6 16 ♔c3 ♔d5 and White cannot make progress.

1...♗xd5!

Black exploits White's faulty move-order to liquidate into a king and pawn ending in which, despite being a pawn down, he stands to win.

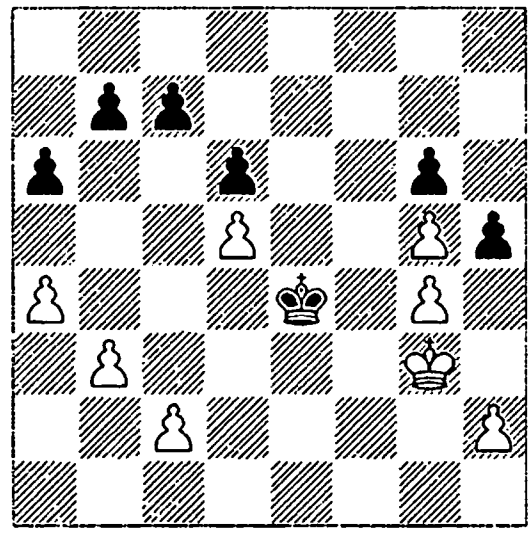
2 f4+ ♔e4 3 cxd5

After 3 gxh5 ♘xg5 4 fxg5 ♗g8 5 h6 Black wins by improving his pawn position on the queenside and then running with his king to take the c2-pawn. In the meantime, White cannot achieve anything with his kingside pawns; for example, 5...a5 6 ♔g4 c5 7 h4 ♗h7 8 h5 ♔d4 and the queenside pawns fall.

3...♘xg5 4 fxg5 *(D)*

After 4 gxh5 ♘h7 5 hxg6 ♘f6 6 g7 ♔f5 Black picks up the g7-pawn and then wins on material.

B



4...h4+!

The only move to avoid losing – and it actually wins! By sacrificing a second pawn, Black traps White's king at the edge of the board.

5 ♔xh4

5 ♔f2 also loses after 5...♔xd5 6 ♔e3 b5 and so on, since Black can create a passed pawn on the queenside while White's extra kingside pawn is useless.

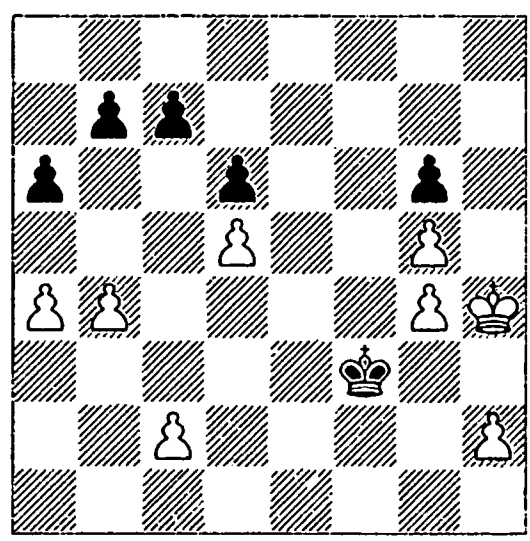
5...♔f3

White cannot avoid having his king stalemated, after which he will be forced to commit suicide on the queenside.

6 b4 *(D)*

6 ♔h3 ♔f2 7 c3 b6 8 b4 b5 9 axb5 axb5 10 ♔h4 ♔g2 11 h3 ♔h2 is also a win for Black.

B



6...b5!

The only winning move. 6...b6? 7 c4 a5 8 b5 ♔g2 9 h3 ♔h2 10 c5 bxc5 11 b6, 6...a5? 7 bxa5 ♔g2 8 h3 ♔f3 9 c4 ♔g2 10 a6 bxa6 11 a5

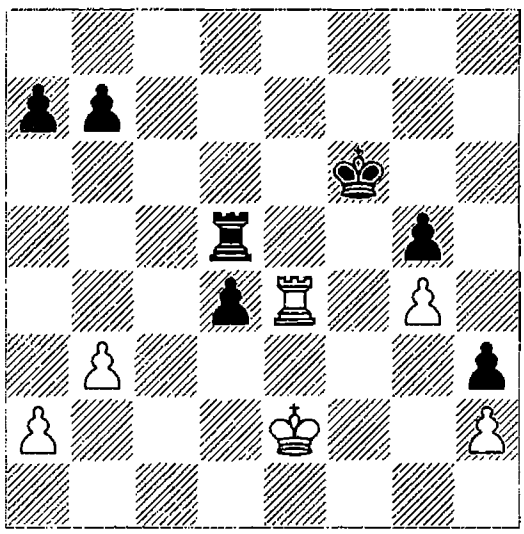
♔f3 12 c5 dxc5 13 d6 and 6...♔g2? 7 a5! b5 (7...♔xh2? even loses after 8 c4 ♔g2 9 b5 ♔h2 10 c5!, creating a passed pawn on the queenside) 8 axb6 cxb6 9 c4 a5 10 bxa5 bxa5 11 c5 a4 12 c6 a3 13 c7 a2 14 c8♕ a1♕ all lead to a draw, the last because White's bad king position negates the effect of the extra pawns.

7 a5 ♔g2 8 h3 ♔h2 0-1

It's mate after 9 c3 ♔g2 10 c4 bxc4 11 b5 c3 12 b6 c2 13 bxc7 c1♕ 14 c8♕ ♕e1#.

The next example features a strikingly similar conclusion, although in this case the game was conducted accurately. Black deserves credit for judging the result of the liquidation to a pawn ending correctly, as there are a few finesses in the subsequent play.

B



R.R. Salgado – Djurhuus
corr. 1992

Black is a pawn up and undoubtedly has winning chances if he keeps the rooks on the board, but he also has the option of playing ...♖e5, heading for a pawn ending which might be a forced win. Once the rooks are exchanged there is no way back, so Black must be completely sure about the result before committing himself. This was a correspondence game, so Black would have been able to check the analysis carefully.

1...♖e5!

Correct. The king and pawn ending is indeed a win.

2 ♔d3

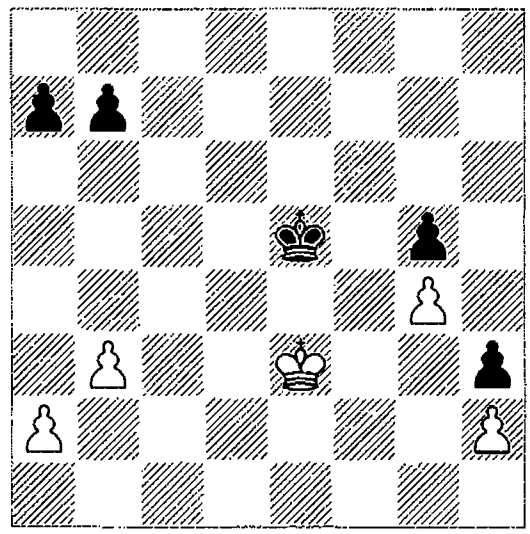
2 ♔f3 ♖xe4 3 ♔xe4 is the same.

2...♖xe4 3 ♔xe4 d3!

The pawn is doomed in any case, so Black sacrifices it to get his king one square further forward.

4 ♔xd3 ♔e5 5 ♔e3 *(D)*

B



Now Black has to seize the opposition in order to advance any further with this king. The only pawn moves available for either side lie on the queenside. Which pawn move should Black play so as to be sure that White will end up having to move his king?

5...b6!

This is the only winning move, and (as often happens in such cases) it is the one that makes the pawn formation on the relevant side of the board symmetrical. Now Black can simply mirror White's pawn moves, for example meeting a3 by ...a6 or a4 by ...a5, ensuring that it will be White's turn when the pawn moves run out. The other pawn moves don't work:

1) 5...b5? 6 b4 a6 7 a3 and it is Black to move.

2) 5...a6? 6 b4! b6 7 a4 and again it will be Black to move.

3) 5...a5? looks as if it should be as good as 5...b6, because this move too ensures that White will be to play after the pawn moves are exhausted. However, it fails to win because it allows White to block the pawn-structure, which gives him the possibility of a stalemate defence: 6 a3 b5 7 b4 a4 8 ♔f3 ♔d4 9 ♔g3 ♔e3 (9...♔c3 10 ♔xh3 ♔b2 11 ♔g2 ♔xa3 12 h4 gxh4 13 g5 ♔xb4 14 g6 a3 15 g7 a2 16 g8♕ a1♕ 17 ♕f8+ ♔b3 18 ♕f7+ leads to perpetual

check since Black's queen is very poorly placed in the corner of the board) 10 ♔xh3 ♔f3 stalemate (10...♔f4 11 ♔g2 ♔xg4 12 h3+ ♔f4 13 ♔f2 is also a draw). In the game the queenside pawns are not totally blocked, and then this stalemate defence doesn't work.

6 ♔f3

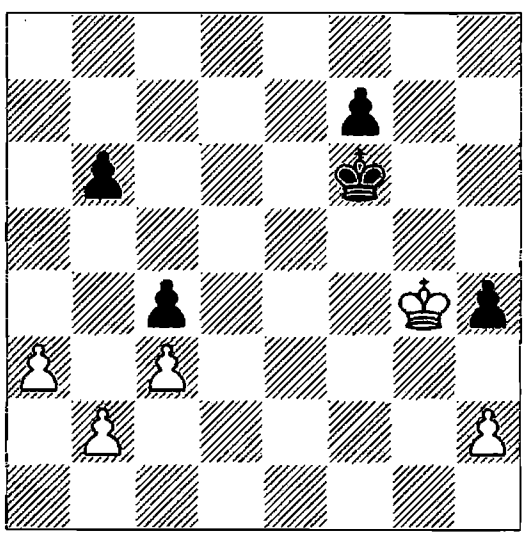
6 ♔d3 ♔f4 7 ♔d4 ♔xg4 8 ♔e4 ♔h4 9 ♔f5 g4 10 ♔f4 ♔h5 11 ♔g3 ♔g5 is a win for Black, while pawn moves on the queenside don't change the situation. White therefore decides to head for the h3-pawn.

6...♔d4 7 ♔g3 ♔e3 8 ♔xh3 ♔f2! 0-1

The key move. White's king is now stalemated, and he is forced to commit suicide on the queenside. It doesn't make much difference how White arranges his queenside pawns since it comes to the same thing in the end; for example, 9 a3 (or 9 a4 a5 10 b4 axb4 11 a5 b3 12 axb6 b2 13 b7 b1♕ 14 b8♕ ♕f1#) 9...a6 10 b4 b5 11 a4 bxa4 12 b5 a3 13 bxa6 a2 14 a7 a1♕ 15 a8♕ ♕f1+ and mate next move. Note, however, that 8...♔f3? would have been wrong because after 9 a4! a5 10 b4 axb4 11 a5 b3 12 a6 White will promote with check.

Even if the king is not actually stalemated, it can be disastrous for it to be trapped on the edge of the board.

B



M. Ly – Rogers
Queenstown 2006

Material is equal and both sides have certain advantages. White's queenside pawn-majority is crippled, so his extra pawn on that side of the board has little value. On the other hand, Black's h-pawn is about to fall, after which White will not only be a pawn up but also have an outside passed pawn on the kingside. However, the most important factor is that while White is taking the h4-pawn, Black can bring his king into a position where it can trap White's king on the h-file, where it blocks its own passed pawn. This gives Black time to advance his f-pawn and force a win.

1...♔e5

The only move to win; Black's king is heading for f4.

2 ♔xh4 ♔f4!

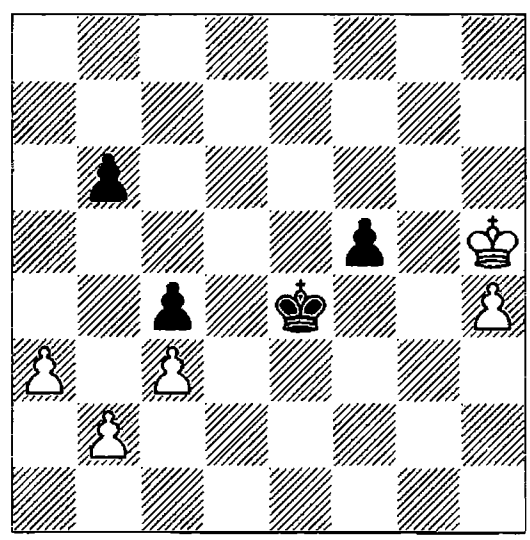
The key move; now White will have trouble extracting his king and freeing the h-pawn. 2...f5? 3 ♔g3 ♔e4 4 ♔f2 only leads to a draw.

3 ♔h5

Or 3 ♔h3 ♔f3! 4 ♔h4 f5 5 ♔g5 f4 6 h4 ♔e4!, transposing to the game.

3...f5 4 h4 ♔e4! *(D)*

W



The only square to win. Black must cover the f4- and f5-squares, as he will need them for queen checks later, but he cannot move his king to e5 as then White would promote with check.

5 ♔g5

5 ♔g6 just loses one move more quickly as Black can check on f5 directly once both sides have promoted.

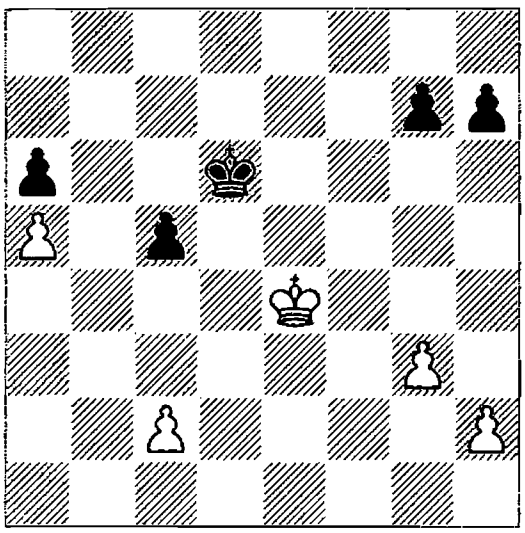
5...f4 6 h5 f3 7 h6 f2 8 h7 f1♕ 9 h8♕ ♕f4+!

The only move to win. Black forces the exchange of queens and then runs for the b2-pawn with his king.

10 ♔g6 ♕f5+ 11 ♔g7 ♕e5+ 12 ♔g8 ♕xh8+ 0-1

This theme must be a speciality of Ian Rogers, because he succeeded with the same basic idea in the following position, which is a slightly more complicated version of the 'king trapped on the edge' theme.

B



Rogers – M. Zaitsev
2nd Bundesliga 2003/4

White is clearly better in this position since his king is more actively posted and the c5-pawn is a potential weakness. However, with accurate play Black should secure the draw.

1...c4?

One of several ways for Black to go wrong. Here are the alternatives:

1) 1...♔c6? loses at once to 2 c4 ♔d6 3 ♔f5!, and Black's king is driven back.

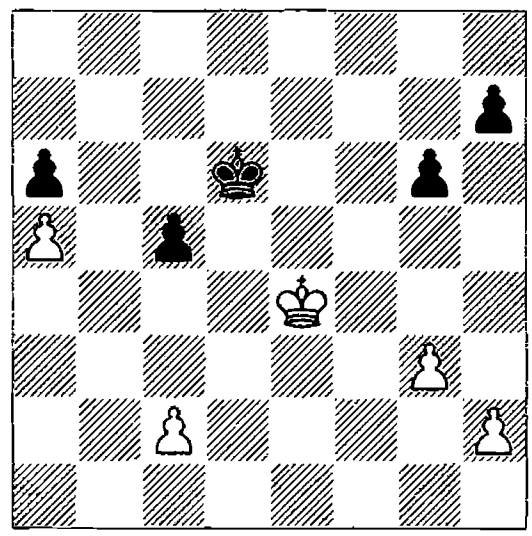
2) Rogers believed that 1...♔e6? draws, but White can win by 2 g4:

2a) 2...g6 3 h4 ♔d6 4 ♔f4 ♔d5 (4...♔e6 5 ♔g5 ♔f7 6 ♔h6 ♔g8 7 c4 ♔h8 8 h5 gxh5 9 ♔xh5 ♔g7 10 g5 ♔f7 11 ♔h6 ♔g8 12 g6 and 4...h6 5 h5 gxh5 6 gxh5 ♔d5 7 ♔f5 c4 8 ♔g6 ♔d4 9 ♔xh6 also win for White) 5 ♔g5 ♔d4 6 ♔h6 ♔c3 7 ♔xh7 c4 8 g5 ♔xc2 9 h5 c3 10 hxg6 ♔d3 11 g7 c2 12 g8♕ c1♕ 13 ♕d5+ leads to an easily winning queen ending for White.

2b) 2...♔d6 3 h4 ♔e6 4 h5! g6 5 hxg6 hxg6 6 ♔f4 ♔f6 7 c3! and White wins after 7...g5+ 8 ♔e4 ♔e6 9 c4 or 7...♔e6 8 ♔g5 ♔f7 9 ♔h6 ♔f6 10 g5+ followed by c4.

3) 1...g6! *(D)* is one of only two moves to draw.

W



White has two winning tries:

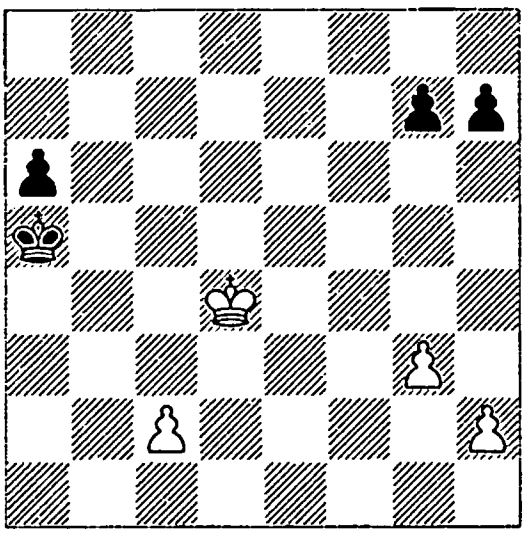
3a) 2 h4 h5! (2...♔c6?! 3 c4 ♔d6 4 ♔f4 ♔e6 5 ♔g5 ♔e5 6 ♔h6 ♔d4 7 ♔xh7 ♔xc4 8 ♔xg6 ♔b4 9 h5 c4 10 h6 c3 11 h7 c2 12 h8♕ c1♕ 13 ♕e5 is better for White, but the win is not certain as White's kingside pawn is only on the third rank and the a5-pawn is already under attack from Black's king) 3 c3 ♔e6 4 c4 ♔d6 5 ♔f4 ♔e6 6 ♔g5 ♔f7 7 g4 hxg4 8 ♔xg4 ♔f6 9 ♔f4 ♔e6 10 ♔g5 ♔f7 and White is unable to make progress.

3b) 2 g4 ♔c6! (2...♔e6? 3 h4! transposes to the analysis of 1...♔e6?) 3 c4 (3 h4 ♔b5 4 ♔d5 c4! 5 c3 ♔xa5 6 ♔xc4 ♔b6 7 ♔d5 a5 8 c4 a4 9 ♔d6 ♔b7 10 ♔d7 ♔b6 is also only a draw) 3...♔d6 4 ♔f4 ♔e6 5 h3 h6 6 h4 ♔f6 7 h5 g5+ 8 ♔e4 ♔e6 and Black has the opposition.

4) 1...h5! was not mentioned by Rogers, but it is also sufficient for a draw: 2 ♔f5 (2 c4 ♔e6 and 2 h4 ♔e6 are also drawn) 2...c4 3 ♔g6 ♔d5 4 ♔xg7 ♔d4 5 ♔g6 ♔c3 6 ♔xh5 ♔xc2 7 g4 c3 8 g5 ♔b2 9 g6 c2 10 g7 c1♕ 11 g8♕ ♕d1+ 12 ♕g4 ♕d5+ 13 ♕g5 ♕d1+ and White cannot evade the checks without giving up a pawn.

The move played looks wrong because Black voluntarily weakens the c-pawn. It is true that while White is taking this pawn, Black can take the pawn on a5, but then Black's king is trapped on the edge of the board, blocking its own pawn, and this allows White an easy win.

2 ♔d4 c3 3 ♔xc3 ♔c5 4 ♔d3 ♔b5 5 ♔d4 ♔xa5 *(D)*



Black has an outside passed pawn, but his poor king position is a far more important factor.

6 ♔c5!

The key move. Now Black has to waste time in order to free his a-pawn, with the result that White can reach an easily winning queen ending.

6...♔a4 7 c4 a5

Or 7...♔b3 8 ♔d5 a5 9 c5 a4 10 c6 a3 11 c7 a2 12 c8♕ a1♕ 13 ♕c4+ followed by the exchange of queens, after which White plays ♔e6 and takes the kingside pawns.

8 ♔d5 1-0

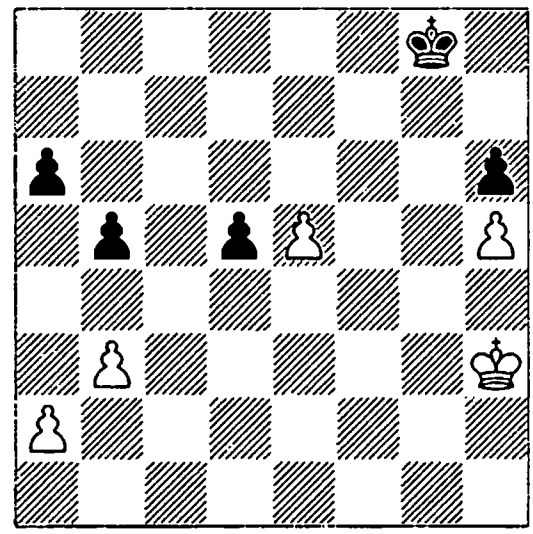
8...♔b4 9 c5 a4 10 c6 a3 11 c7 a2 12 c8♕ a1♕ 13 ♕b7+ again results in a queen exchange and subsequent victory for White.

Summary:

- A poor king position can doom an otherwise acceptable position.
- A king is often badly placed on the edge of the board, especially if it obstructs a passed pawn.
- It may be worth sacrificing a pawn to trap a king on the edge of the board.

2.4.2 Active King Position

Here we have a slight shift of emphasis. Just as the enemy's position may be doomed by a bad king position, so one's own position may be greatly strengthened by an active king. Certainly, the two often go hand in hand; if one's own king is active, the enemy king may be squeezed out of the best squares and automatically be forced to assume a passive role. However, the focus here is on the positive qualities of an active king. It is usually an advantage for a king to occupy an advanced central position, which renders it easier to make a run for enemy pawns on either side of the board.



Gavrikov – Kharitonov
Sverdlovsk 1984

Here's an example. At first sight there isn't much to choose between White and Black in this almost symmetrical position. However, it turns out that White's more active king position gives him a decisive advantage.

1 ♔g4 ♔f7 2 ♔f5

Now that White's king has taken up the best possible position, he threatens e6+ followed by ♔e5, which leads to a race that White wins.

2...b4

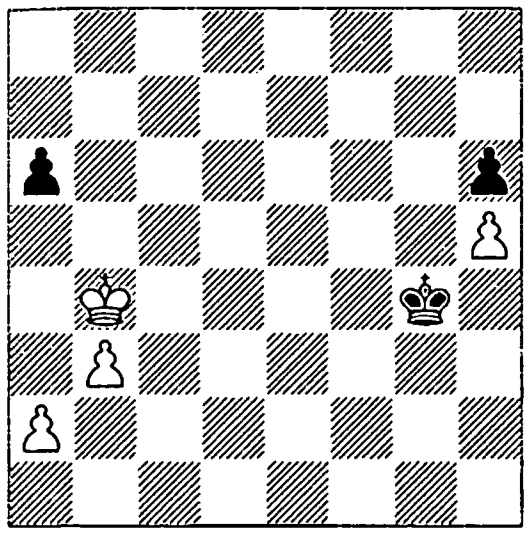
Black decides to prevent White from playing b4. The alternative was 2...♔e7, but then White wins by 3 b4! with zugzwang. Black has no choice but to move his king, which allows White to play e6 with gain of tempo: 3...♔d7 4 e6+ ♔e7 5 ♔e5 d4 6 ♔xd4 ♔xe6 7 ♔c5 ♔f5 8 ♔b6 ♔g5 9 ♔xa6 ♔xh5 10 ♔xb5 ♔g4 11 a4 and when White promotes, he also prevents Black from promoting.

3 e6+ ♔e7 4 ♔e5 d4 5 ♔xd4 ♔xe6 6 ♔c5 ♔f5

After 6...a5 7 ♔b5 White wins easily.

7 ♔xb4 ♔g4 *(D)*

The critical moment. Where should White move his king?



8 ♔a5?

White chooses the wrong square and throws away the win. It is important that White promotes on a8, so as to prevent the promotion of Black's pawn on h1. Clearly this won't be possible if the white king is blocking the a-pawn. One winning line is 8 ♔c5! (or 8 a4! ♔xh5, when White wins after 9 ♔c5, 9 ♔c3 or 9 ♔a3) 8...♔xh5 9 b4 ♔g4 10 a4 h5 11 b5 axb5 (11...h4 12 bxa6 is similar) 12 a5! and Black will not be able to promote.

8...♔xh5

Now White cannot do better than reach a drawn ending of ♕+♙ vs ♕.

9 ♔xa6 ♔g4 10 b4 h5 11 b5 h4 12 b6 h3 13 b7 h2 14 b8♕ h1♕

In ♕+♙ vs ♕, the least favourable pawn for the attacker is the rook's pawn, and the pawn normally needs to be far-advanced to offer any winning chances at all.

15 ♕c8+ ♔g5 16 ♕c5+ ♔g4 17 a4 ♕a8+ 18 ♔b5 ♕e8+ 19 ♔b4 ♕e1+ 20 ♕c3 ♕e7+ 21 ♔b3 ♔f5 *(D)*

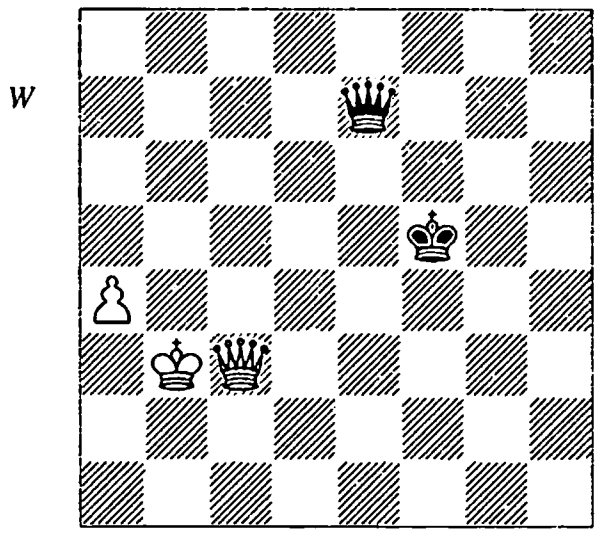
White's pawn is so far back that Black can even draw by playing his king towards the pawn. When the pawn is further advanced, this plan is not possible and Black should keep his king near the h1-corner.

22 a5

22 ♕f3+ ♔e6 23 ♕e3+ ♔d6 24 ♕xe7+ ♔xe7 is drawn.

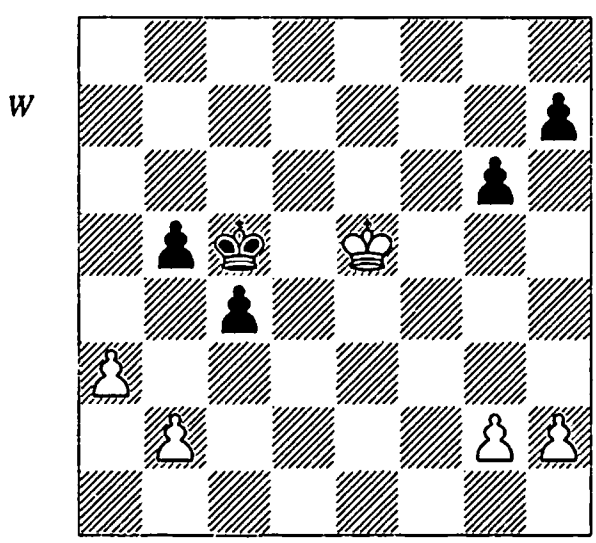
22...♕b7+ 23 ♔a4

Or 23 ♕b4 ♕d5+ 24 ♔a4 ♔e6 25 a6 ♔d7 26 a7 ♕a2+ 27 ♕a3 ♕c4+ 28 ♔a5 ♕d5+, again with a draw.



23...♔e6 24 ♕c4+ ♔d6 25 ♕f4+ ♔d7 26 ♕f7+ ♔c8 27 ♕e8+ ♔c7 ½-½

While a centralized king almost always confers an advantage, it may not be sufficient to win.



Plachetka – Petran
Czechoslovak Ch, Ostrava 1976

White has whatever advantage there is in the position, since he can hope to liquidate the queenside pawns and then be the first the reach the kingside pawns with his king. However, if Black defends accurately, this plan should not succeed.

1 h4

1 g4 is most simply met by 1...g5! 2 ♔e4 c3 (2...b4 also draws) 3 bxc3 ♔c4 4 ♔e5 ♔xc3 5 ♔d5 ♔b3 6 ♔c5 ♔a4! (but not 6...♔xa3?, losing to 7 ♔xb5 ♔b3 8 ♔c5 ♔c3 9 ♔d5 ♔d3 10 ♔e5 ♔e3 11 ♔f5 h6 12 ♔g6 ♔f4 13 h3) 7 h3

♔a5! (7...h6? loses to 8 ♔b6 b4 9 axb4 ♔xb4 10 ♔c6) 8 ♔c6 ♔a4 9 ♔c5 ♔a5 and White cannot win.

1...h6?

Black immediately goes wrong. One drawing line was 1...b4 2 axb4+ ♔xb4 3 g4 (or 3 ♔d4 ♔b3) 3...♔b3 4 ♔d5 ♔xb2 5 ♔xc4 ♔c2 6 ♔d4 ♔d2 and Black is safe, since his kingside pawns are less vulnerable than in the game, but Black could also have held the game by 1...c3 2 bxc3 ♔c4 or 1...h5, amongst others.

2 g4 g5

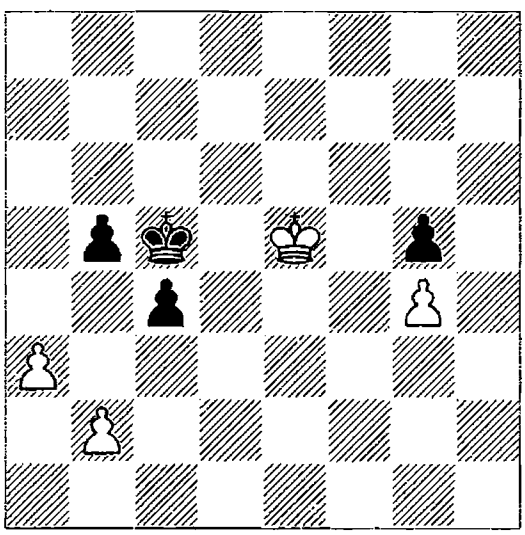
2...b4 loses more quickly after 3 axb4+ ♔xb4 4 ♔d4 (4 g5 also wins but is more complicated) 4...♔b5 (or 4...♔b3 5 ♔c5) 5 ♔d5 ♔b4 6 ♔c6 g5 (6...h5 7 g5 c3 8 bxc3+ ♔xc3 9 ♔d5 ♔d3 10 ♔e5 ♔e3 11 ♔f6 ♔f4 12 ♔xg6 ♔g4 13 ♔f6 ♔xh4 14 g6 and White wins) 7 hxg5 hxg5 8 ♔b6 with an easy win as the g5-pawn falls as soon as the queenside pawns disappear. 2...h5 3 g5 also offers no hope for Black.

3 hxg5

3 h5? b4 4 axb4+ ♔xb4 5 ♔d4 ♔b3 6 ♔c5 c3 7 bxc3 ♔xc3 is only a draw.

3...hxg5 *(D)*

W



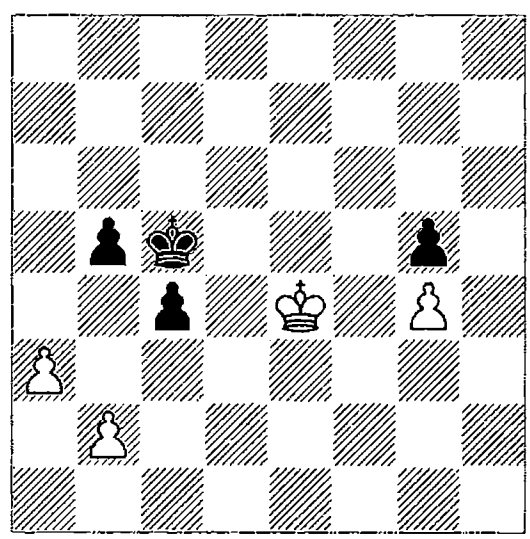
Plachetka's notes in *Informator 22* give this position as drawn, but actually White has a neat win.

4 ♔e4?

White misses an opportunity to win using some of the ideas from Section 2.2.3 (page 34). The basic idea is that if it were Black to play here then White would have the opposition, which would allow White's king eventually to penetrate to the rear of the queenside pawns. The win involves a triangulation to lose a tempo: 4 ♔e6! ♔c6 (4...b4 5 axb4+ ♔xb4 6 ♔d6! ♔b5 7 ♔d5 ♔b4 8 ♔c6 ♔a4 9 ♔c5 ♔b3 10 ♔b5 forces a decisive liquidation) 5 ♔f5 (the key point is that by threatening to take on g5, White forces Black's king to move to c5; this prevents Black from matching White's triangle) 5...♔c5 (after 5...♔d5 6 ♔xg5 White is too quick) 6 ♔e5! (6 ♔xg5? b4 is a draw, but by returning to e5 White passes the move to Black) 6...♔c6 (6...b4 7 axb4+ ♔xb4 8 ♔d4 ♔b5 9 ♔d5 ♔b4 10 ♔c6 and White wins as before, while 6...c3 7 bxc3 ♔c4 8 ♔d6 ♔xc3 9 ♔c5 is also decisive) 7 ♔e6 ♔c5 (7...♔c7 takes the king too far back and White wins by 8 ♔f5 followed by ♔xg5) 8 ♔d7 ♔b6 (8...b4 9 axb4+ ♔xb4 10 ♔c6 and again White wins) 9 ♔d6 ♔a7 (9...♔a5 10 ♔c5 transposes) 10 ♔c7 ♔a6 11 ♔c6 ♔a5 12 ♔c5 ♔a6 (12...♔a4 13 ♔b6 b4 14 axb4 ♔xb4 15 ♔c6 wins for White) 13 a4 bxa4 14 ♔xc4 ♔a5 15 ♔c5 and White wins.

We now return to 4 ♔e4? *(D)*:

B



4...b4?

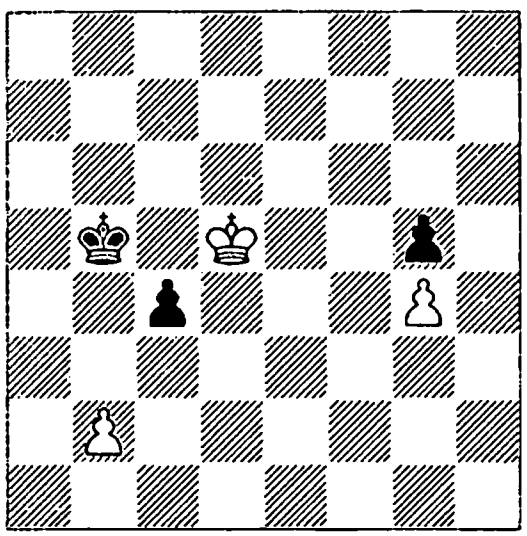
Black overlooks the drawing opportunity presented by White's previous move. The alternatives are:

1) 4...♔c6? 5 ♔f5! ♔c5 6 ♔e5 ♔c6 (after 6...b4 7 axb4+ ♔xb4 8 ♔d4 White wins as in the game) 7 ♔e6 ♔c5 8 ♔d7 ♔d5 9 ♔c7 ♔c5 10 ♔b7 b4 11 axb4+ ♔xb4 12 ♔b6 and White wins.

2) 4...♔b6? 5 ♔d4 ♔c6 6 a4 ♔b6 7 axb5 ♔xb5 8 ♔d5 ♔b4 9 ♔c6 is decisive.

3) 4...c3! is the saving move: 5 bxc3 ♔c4 6 ♔e5 (or 6 ♔f5 ♔xc3 7 ♔xg5 ♔b3 and both sides promote at the same time) 6...♔xc3 7 ♔d5 ♔b3 8 ♔c5 ♔a4 9 ♔c6 (not 9 ♔b6? b4! and Black wins) 9...♔a5 10 ♔c5 with a draw.

5 axb4+ ♔xb4 6 ♔d4 ♔b5 7 ♔d5 *(D)*

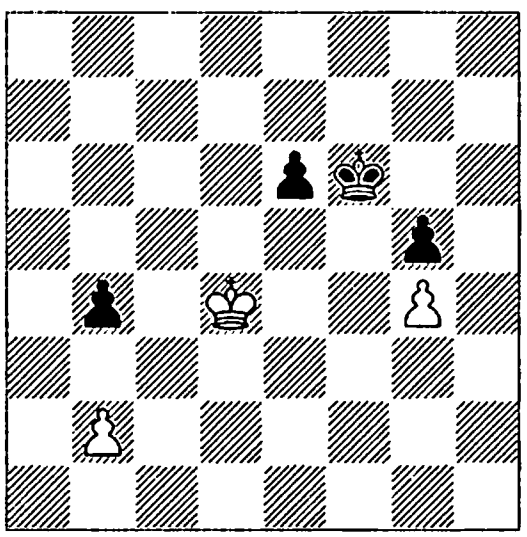


Black cannot avoid the exchange of queenside pawns forever.

7...♔b4 8 ♔c6 ♔a4 9 ♔c5 ♔b3 10 ♔b5! 1-0

White wins after 10...c3 11 bxc3 ♔xc3 12 ♔c5.

In some cases an active king can compensate for an extra pawn.



de la Paz – Gonzalez Zamora
Merida 2005

This position is a draw, but which move is correct?

1 b3!

White finds the only move to hold the game. Everything else loses:

1) 1 ♔c5? ♔e5 2 ♔xb4 ♔d4! (the only move to win, keeping the white king at bay) 3 ♔b3 ♔d3! (now the white king must move to the a-file) 4 ♔a4 (4 ♔a2 e5 5 b4 ♔c4 and Black wins) 4...e5 5 b4 e4 6 b5 e3 7 b6 e2 8 b7 e1♕ 9 b8♕ ♕a1+ 10 ♔b5 ♕b2+ and the queen falls.

2) 1 ♔e4? e5 2 ♔d5 b3 (a position of reciprocal zugzwang) 3 ♔c4 e4! 4 ♔xb3 (4 ♔d4 e3 5 ♔xe3 ♔e5 6 ♔d3 ♔f4 7 ♔c3 ♔xg4 8 ♔xb3 ♔f3 and the g-pawn is too quick) 4...♔e5 5 ♔c2 ♔f4 6 b4 ♔xg4 7 b5 e3 8 b6 ♔f3 9 b7 e2 10 b8♕ e1♕ and this ending of ♕+♙ vs ♕ is a win for Black, even though his pawn is relatively far back, because White's king is far away from the drawing zone in the a8-corner.

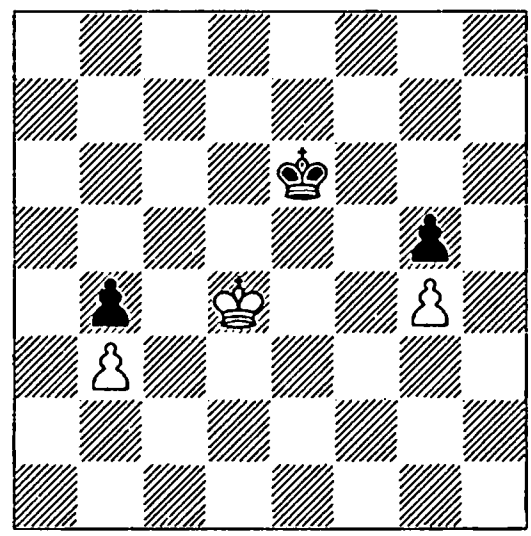
1...e5+!

As a matter of fact, this is the only move even to draw for Black. 1...♔e7? loses after 2 ♔c5 e5 3 ♔xb4 ♔d6 4 ♔c4 (the outside passed pawn is decisive) 4...♔c6 5 b4 ♔d6 6 b5 ♔c7 7 ♔d5 ♔b6 8 ♔xe5 ♔xb5 9 ♔f5.

2 ♔d5

After 2 ♔c4? e4 White loses exactly as in the analysis of 1 ♔e4?.

2...e4! 3 ♔xe4 ♔e6 4 ♔d4 *(D)*



4...♔d6

It is unusual in a king and pawn ending for there to be such a long sequence of moves by both sides which are forced in order to avoid defeat. Now, however, White has a choice.

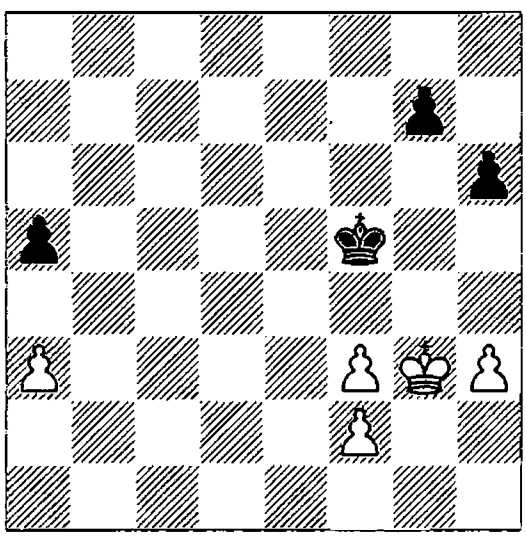
5 ♔e4

5 ♔c4 ♔e5 6 ♔xb4 ♔f4 7 ♔c4 ♔xg4 8 b4 also draws.

5...♔e6 6 ♔d4 ♔d6 7 ♔e4 ♔e6 ½-½

The following position again features the struggle of an active king against an extra pawn. In this case the complexities proved too much for the two grandmaster players, and for the (unnamed) annotator in *Informator 48*.

W



P. Nikolić – Jinrong Liang
World Team Ch, Lucerne 1989

White is a pawn up, but his extra pawn is doubled and Black's king is in an active position. These conflicting factors make it hard to assess the result on general principles, and precise calculation is necessary in order to establish whether White can win. The notes in *Informator 48* mistakenly claimed that the position should be a draw with correct play, but White can win, although he has to choose the correct first move in order to do so.

1 a4?

Informator made no comment on this move, but it throws away the win. 1 f4! is the decisive continuation; after 1...a4 2 ♔f3 g6 3 ♔e3 h5 4 ♔f3 (White just oscillates between e3 and f3 until eventually Black is forced to withdraw his king) 4...♔f6 5 ♔e4 ♔e6 6 h4 ♔f6 7 f5! gxf5+ 8 ♔f4 the white king penetrates with decisive effect.

1...♔g5?

This is a serious mistake which allows White to drive Black's king back and exploit the extra pawn. Black actually had two better moves:

1) 1...g5 (this draws, contrary to *Informator*) 2 f4 gxf4+ 3 ♔h4 h5!! (an extremely surprising move, practically forcing White to take the pawn straight away; 3...♔e4? 4 ♔g4 h5+ 5 ♔xh5 f3 6 ♔g5 and 3...f3? 4 ♔g3 ♔e4 5 ♔g4 do indeed win for White) 4 ♔xh5 (after 4 f3 ♔g6 White is stalemated) 4...f3! 5 ♔h6 ♔f6 6 h4 ♔f5 7 h5 ♔g4 8 ♔g6 ♔h3 9 h6 ♔g2 10 h7 ♔xf2 11 h8♕ ♔g1 leads to a surprising draw. The white king blocks the g-file, so White cannot prevent Black from playing ...f2 when, to add to White's misfortunes, his king is one square too far away to win. It is curious that the a-pawns make no essential difference to the position, although if White wishes he can reach a drawn ending of ♕+a♙ vs ♕ by simply taking on a5.

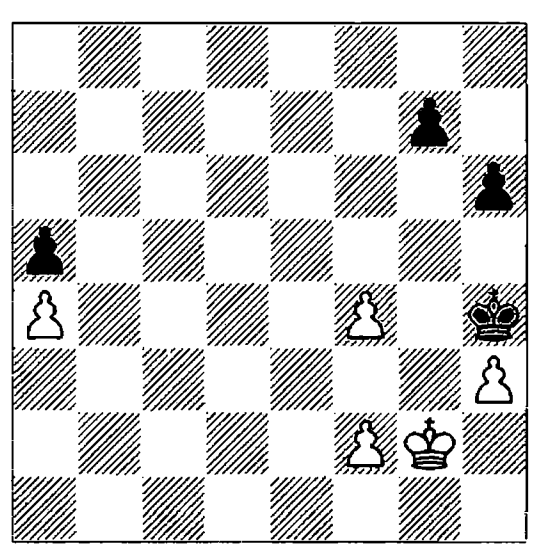
2) 1...h5! 2 f4 ♔e4 is the simplest draw, whereby Black exploits his active king position to save the game: 3 ♔h4 ♔xf4 4 ♔xh5 ♔f3 5 ♔g6 ♔xf2 6 ♔xg7 ♔g3 7 ♔f6 ♔xh3 8 ♔e5 ♔g4 and Black makes it back to c8 in time.

2 f4+ ♔h5

White wins after 2...♔f5 3 ♔f3 g6 4 ♔e3 as in the note to his first move.

3 ♔f3 ♔h4 4 ♔g2 *(D)*

B



4...♔h5

4...g6 is even worse: 5 ♔h2 ♔h5 6 ♔g3 g5 7 f5.

5 ♔g3 ♔g6 6 ♔g4

Now that White's king occupies an active position, it isn't hard to put the extra pawn to good use.

6...♔f6 7 f5 ♔e5 8 f3 h5+

8...♔d5 9 ♔h5 is also an easy win for White.

9 ♔g5 h4 10 ♔g4 1-0

After 10...♔f6 11 f4 Black also loses his h-pawn.

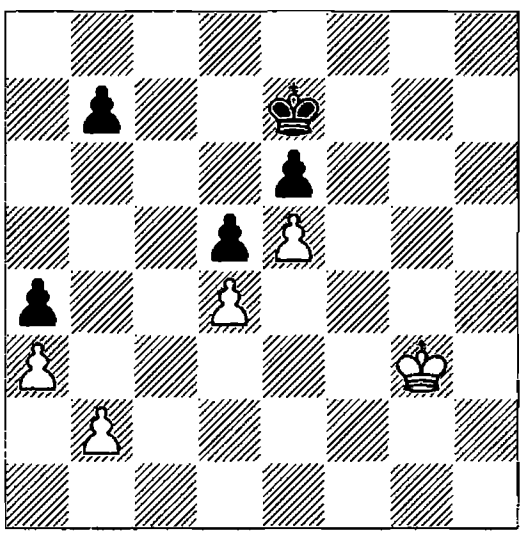
Summary:

- An active king position can be a decisive advantage. If there are pawns on both sides of the board, the king is usually well placed in an advanced central position, ready to run to either side of the board.
- In some cases an active king can compensate for an extra pawn, especially if the extra pawn is reduced in value due to pawn weaknesses.

2.5 Reserve Tempi

A *reserve tempo* is a spare pawn move which can be played at any moment. Reserve tempi are often crucial in zugzwang battles. If you possess one reserve tempo more than your opponent, then you need not fear losing the opposition, since by using your reserve tempo you can pass the move to your opponent. The same comment applies to other zugzwang situations. Here's an example.

B



Vykydal – Prandstetter
Czechoslovak Ch, Frenstat 1982

At first glance, one might suspect that White's more active king position and space advantage would give him winning chances, but in fact White is lost. The reason is Black's two reserve pawn tempi on the queenside. The kings will oppose each with, for example, White's king on g4 and Black's on g6. Then by playing ...b6 Black will gain the opposition and force his king forward one rank. When the kings oppose each other again on g3 and g5, Black will play ...b5, and the second reserve tempo will once more give him the opposition, allowing his king to penetrate and attack the d4-pawn. Eventually Black can force a winning queen ending.

1...♔f7 2 ♔f4

2 ♔g4 ♔g6 is even worse as Black saves one of his reserve tempi.

2...♔g6 3 ♔g4 b6!

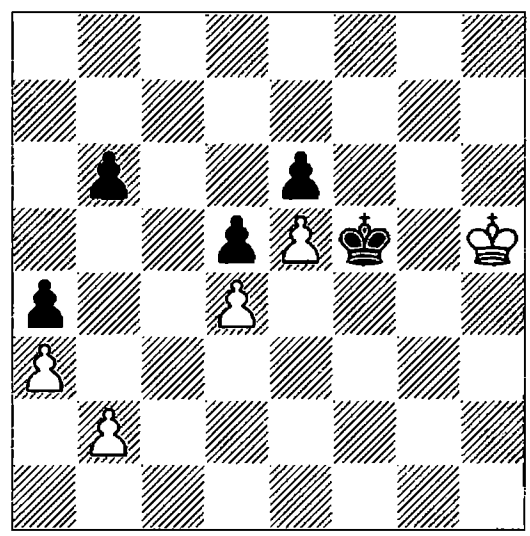
The first zugzwang.

4 ♔h4

White correctly concludes that he must play for a counterattack at some stage. After 4 ♔f4 ♔h5 5 ♔f3 ♔g5 6 ♔g3 b5 7 ♔h3 ♔f4 8 ♔h4 ♔e4 9 ♔g5 ♔xd4 10 ♔f6 play transposes to the game.

4...♔f5 5 ♔h5 *(D)*

B

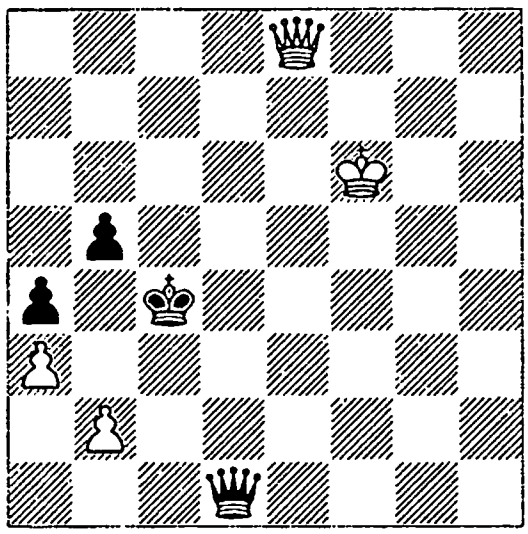


5...b5!

A useful although not absolutely essential finesse. After 5...♔e4 6 ♔g5 ♔xd4 7 ♔f6 ♔c4 8 ♔xe6 d4 9 ♔f5 d3 10 e6 d2 11 e7 d1♕ 12 e8♕ ♕d5+ Black still has a decisive advantage, but in any case ...b5 will be essential to secure his queenside pawns, so he plays it straight away and thereby saves a tempo.

6 ♔h6 ♔e4 7 ♔g6 ♔xd4 8 ♔f6 ♔c4 9 ♔xe6 d4 10 ♔f6 d3 11 e6 d2 12 e7 d1♕ 13 e8♕ *(D)*

White's position is hopeless, since Black has the first check and his king is ideally placed to attack White's queenside pawns.



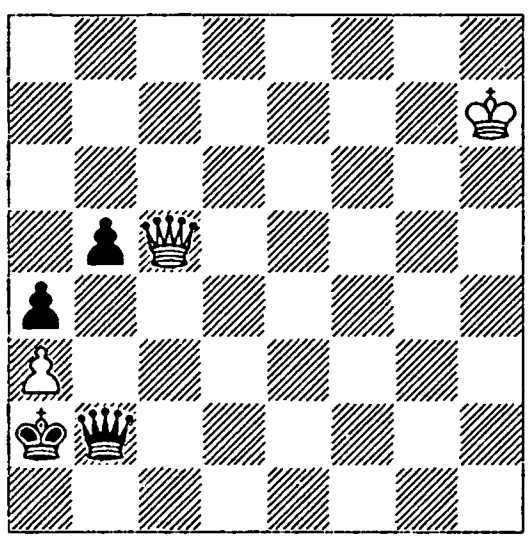
13...♕f1+

Not 13...♕d4+ 14 ♔g6 ♕xb2? 15 ♕c6+ drawing; it's the king that should take on b2 and not the queen.

14 ♔g6 ♔b3 15 ♕e5 ♔a2

Moving the king out of the way so that ...♕g2+ followed by ...♕xb2 will defend the b5-pawn.

16 ♔g7 ♕g2+ 17 ♔h7 ♕xb2 18 ♕c5 *(D)*



18...♕b3

The threat is now ...♕c4, driving White's queen away.

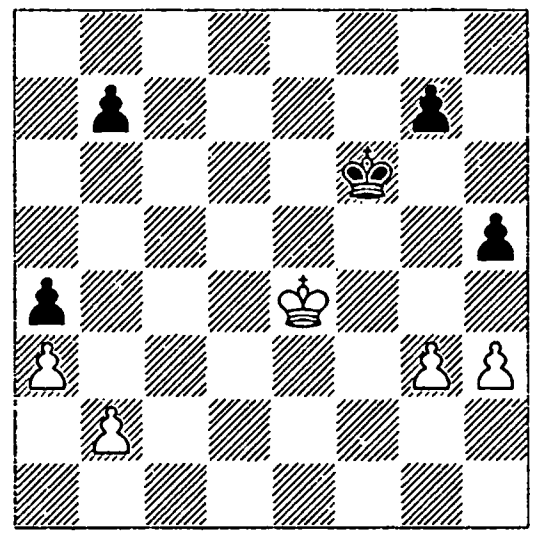
19 ♕d6

There's no defence; for example, 19 ♔g7 ♕xa3 20 ♕xb5 ♕b2+ or 19 ♔h6 ♕c4 20 ♕d6 ♕c1+ followed by ...♕xa3.

19...♕xa3 0-1

After 20 ♕d5+ ♕b3 21 ♕d2+ ♕b2 22 ♕d5+ ♔a1 the checks run out and Black wins comfortably.

The above example shows that reserve tempi can have a powerful effect, overwhelming other apparent advantages. The following position is even more dramatic.



Vlahović – Pikula
Yugoslavia 1993

It's not immediately obvious who is better in this pawn ending. White's king occupies a slightly more active position, but Black has two reserve pawn tempi on the queenside. Thus the situation seems more or less balanced, and a draw appears to be overwhelmingly the most likely result. This view is supported by the game continuation **1...♔g5? 2 ♔e5** (now the white king really occupies a dominant post and Black cannot achieve anything) **2...♔g6 3 ♔e6 ♔g5 4 ♔f7 ♔h6 5 h4 ♔h7 ½-½**. Neither side can make progress.

Perhaps surprisingly, Black missed a win in the diagram position. The two reserve tempi are an important factor in this position, as is the fact that the b2-pawn is vulnerable, so if there is a race with White's king heading to the kingside and Black's to the queenside, then Black is likely to be the winner since his a-pawn promotes rather quickly. This is a typical example of how a space advantage, such as Black's on the queenside here, can play a key role in a king and pawn ending. Here is the winning line:

1...♔e6! 2 h4

Other moves do not save White:

1) 2 g4 hxg4 3 hxg4 ♔f6 4 ♔f4 ♔g6 5 ♔f3 (5 g5 ♔h5 6 ♔f5 g6+ 7 ♔f6 b6 and Black wins)

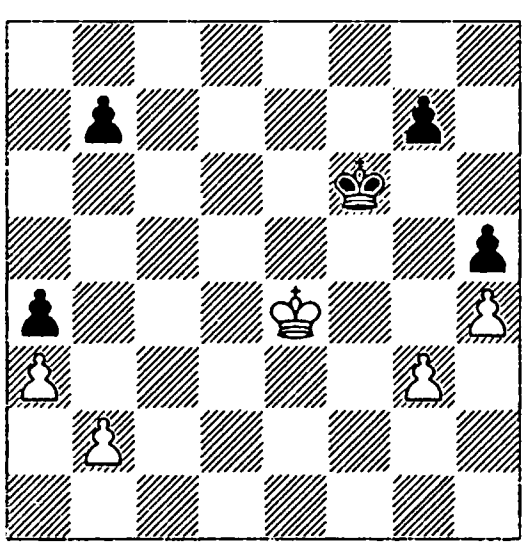
5...♔g5 6 ♔g3 g6 7 ♔f3 ♔h4 8 ♔f4 g5+ 9 ♔f5 b6 and a reserve tempo decides.

2) 2 ♔d4 ♔f5 (Black's plan is ...g5; this gives him the option of ...h4 or ...g4 according to circumstances) 3 ♔d5 g5 4 ♔d4 b6! (this creates a position of reciprocal zugzwang; 4...h4? 5 gxh4 gxh4 6 ♔e3 is a draw, as is 4...g4? 5 h4) 5 ♔d3 (after 5 ♔d5 h4 the king penetrates to f4, while after 5 ♔e3 ♔e5 6 ♔d3 ♔d5 7 ♔e3 ♔c4 8 ♔d2 ♔d4 9 ♔e2 ♔e4 Black's king again penetrates) 5...♔e5 6 ♔e3 g4 7 h4 b5 (Black uses the second reserve tempo to good effect) 8 ♔d3 ♔d5 9 ♔e3 ♔c4 10 ♔d2 ♔d4 and Black wins.

3) 2 ♔f4 ♔d5 3 ♔g5 (3 ♔e3 ♔c4 4 ♔d2 ♔d4! and Black wins) 3...♔c4 4 ♔g6 (4 ♔xh5 ♔b3 5 ♔g6 ♔xb2 6 ♔xg7 ♔xa3 7 h4 ♔b4 8 h5 a3 9 h6 a2 10 h7 a1♕+ 11 ♔g8 ♕a2+ 12 ♔g7 ♕b2+ 13 ♔g8 ♕b3+ and Black wins the g-pawn with check) 4...♔b3 5 ♔xg7 ♔xb2 6 g4 hxg4 7 hxg4 ♔xa3 8 g5 ♔b4 9 g6 a3 and White has no square for his king that avoids the exchange of queens after both sides promote.

2...♔f6! *(D)*

W



Black aims to open up the kingside by playing ...g5.

3 ♔f4

Or 3 g4 hxg4 4 ♔f4 g3 5 ♔xg3 ♔f5! 6 ♔f3 b5 7 ♔g3 ♔e4 8 ♔g4 ♔d3 9 ♔g5 ♔c2 10 ♔g6 ♔xb2 11 ♔xg7 ♔xa3 12 h5 ♔b3 13 h6 a3 14 h7 a2 15 h8♕ a1♕+ and Black wins.

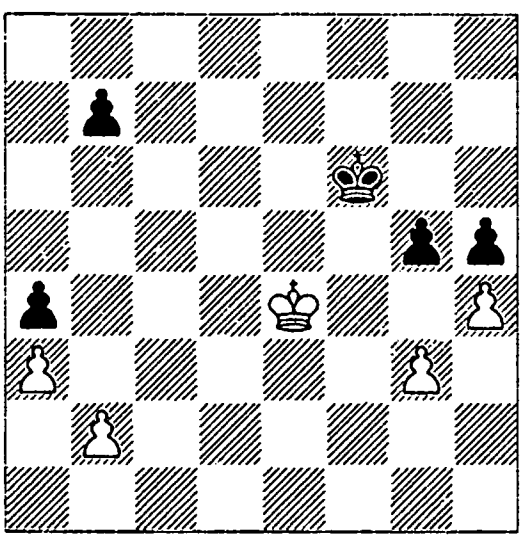
3...g5+!

3...g6? 4 g4! lets White escape.

4 ♔e4 *(D)*

After 4 hxg5+ ♔g6 5 ♔e4 ♔xg5 6 ♔f3 ♔f5 Black gets the position he wants without even having to use a reserve tempo.

B



4...b6!

It's time to use the first reserve tempo. 4...gxh4? is wrong because after 5 gxh4 ♔e6 6 ♔f4 Black cannot run to the queenside as White is too quick with his h-pawn.

5 hxg5+

5 ♔f3 gxh4 6 gxh4 ♔f5 and 5 ♔e3 gxh4 6 gxh4 ♔e5 are hopeless for White.

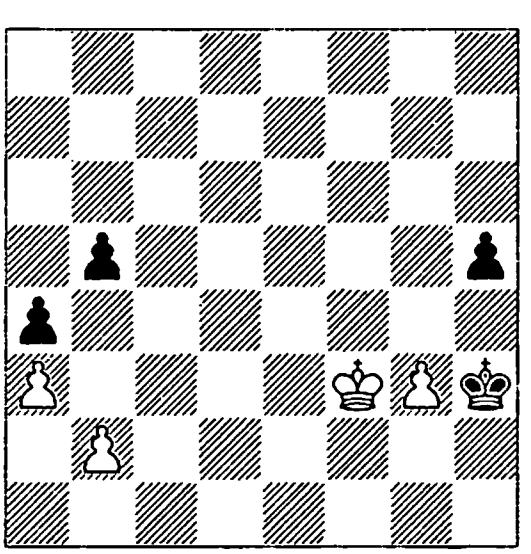
5...♔xg5 6 ♔f3 ♔f5 7 ♔e3

After 7 ♔f2 ♔e4 8 ♔e2 b5 Black wins either the g-pawn or the b-pawn.

7...♔g4 8 ♔f2 ♔h3 9 ♔f3 b5! *(D)*

Black must use his reserve tempi at exactly the right moments. 9...♔h2? 10 g4! allows White to escape.

W



10 ♔f2 ♔h2 11 ♔f3 ♔g1 12 ♔f4

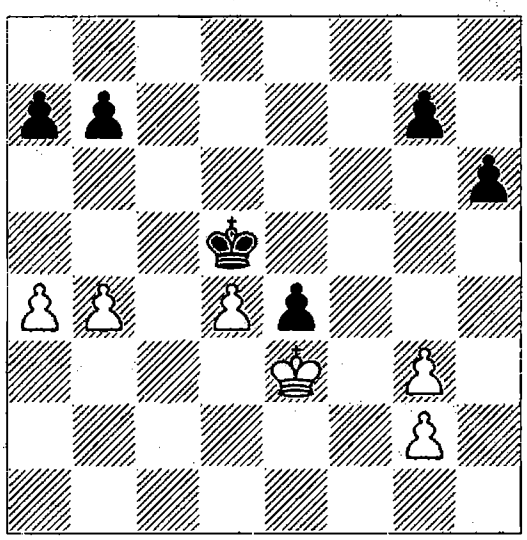
After 12 g4 h4 the h-pawn promotes.

12...♔f2 13 g4 hxg4 14 ♔xg4 ♔e2

Black will win by promoting the a-pawn.

In some positions, there is a reciprocal zugzwang situation in one part of the board, and the two players manoeuvre with their pawns in another part of the board with the aim of leaving the opponent in zugzwang after the pawn tempi have been exhausted.

W



N. Popov – Dankov
Albena 1978

This position depends on a battle for tempi. Whoever runs out of pawn moves first will have to surrender a pawn in the centre and thereby lose the game. At first sight the tempo battle should favour Black, as White has a doubled pawn on the kingside and Black has three pawns on the second rank, normally a favourable factor as a pawn on the second rank still has the choice between advancing either one or two squares. However, concrete calculation always overrules general principles and in this case the doubled pawns turn out to be surprisingly effective.

1 g4!

The only move, since if Black is allowed to play ...h5 he will secure **three** reserve tempi on the kingside, which guarantees success in the tempo battle.

1...a6

It turns out that Black has no way to escape. On the queenside, White can meet ...a6 by a5 and ...b6 by b5, maintaining the status quo. Thus everything depends on the kingside situation and there, surprisingly, White is also able to match Black in the tempo battle; for example, 1...g5 2 g3 is an immediate win for White, while after 1...g6 2 g5! he wins as in the game.

2 a5 g6

Or 2...g5 3 g3 as before.

3 g5!

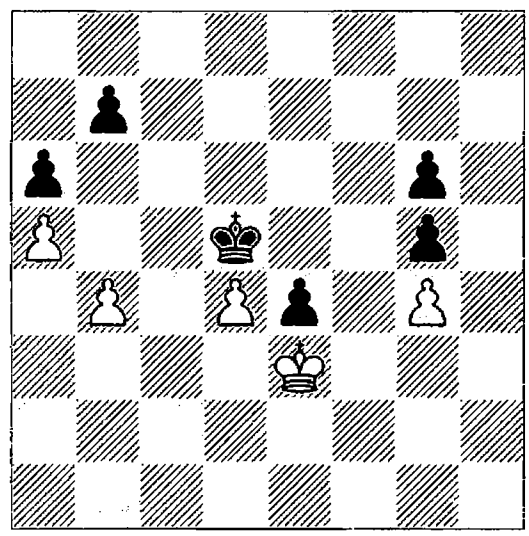
The key move. After 3 g3? g5 it is Black rather than White who wins.

3...hxg5

3...h5 4 g3 also leaves Black in a fatal zugzwang.

4 g4 *(D)*

B



The pawn tempi have been exhausted and Black must now give up his e-pawn, when the extra central passed pawn guarantees an easy win for White.

4...♔d6 5 ♔xe4 ♔e6 1-0

White wins by 6 d5+ ♔d6 7 ♔d4 ♔d7 8 ♔e5, etc.

Summary:

- A *reserve tempo* is a spare pawn move which can be played at any moment. It can be used to lose a tempo and thereby put the opponent in zugzwang.
- Reserve tempi are often used to drive back the enemy king, with each reserve tempo forcing the king back by one rank.
- Reserve tempi are a powerful asset which can be more important than other advantages, such as a better-placed king.

2.6 All the Pawns on One Side

One special case arises when there is material equality and all the pawns are on one side of the board. If the defender has no particular weaknesses or disadvantages, then the result is almost always a draw. However, in practice it often happens that the defender's king starts off further away from the remaining pawns (for example, if it has been deflected by a passed pawn) and then the attacker has chances to penetrate with his king and win. One might imagine that cases like this are simply a matter of counting, but there are subtleties which, because they are unexpected, are easily missed in practical play.

In the simplest cases, it's just a matter of whether the attacker's king can get among the enemy pawns, as in the following example.

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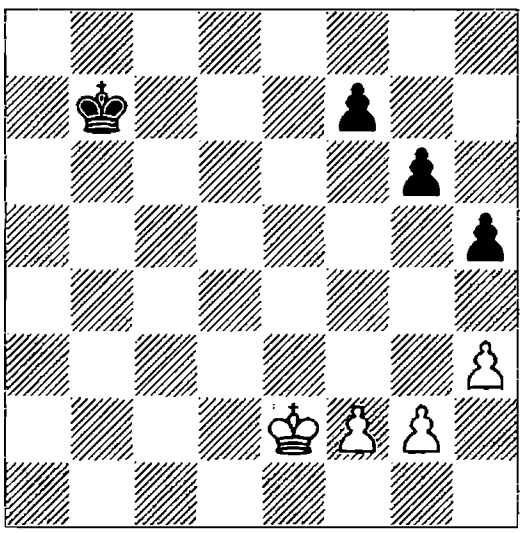


J. Pelikian – Tsuboi
São Paulo Ch 2002

This position should be drawn as Black can prevent the white king from penetrating into Black's pawn-mass.

1 ♔e3 ♔c6 2 ♔f4 ♔d5?

It's a serious mistake to allow the white king to reach g5. Black could have drawn simply enough by 2...f6!.

3 ♔g5

Now White should win.

3...♔e5 4 f3? *(D)*

Handing the half-point back again. White could have won by 4 f4+ (4 h4 ♔e6 5 f4 is equally good) 4...♔e6 (or 4...♔e4 5 h4! ♔e3 6 f5 gxf5 7 ♔xf5 ♔f2 8 g4 hxg4 9 ♔xg4) 5 h4 ♔e7 6 f5 and Black will lose a pawn.

4...h4! ½-½

Black finds the unique saving move. 4...♔e6? is wrong due to 5 f4 h4 6 ♔xh4 ♔f5 7 ♔g3 f6 8 ♔f3 ♔e6 9 ♔g4 and White wins.

After the move played, White is unable to win:

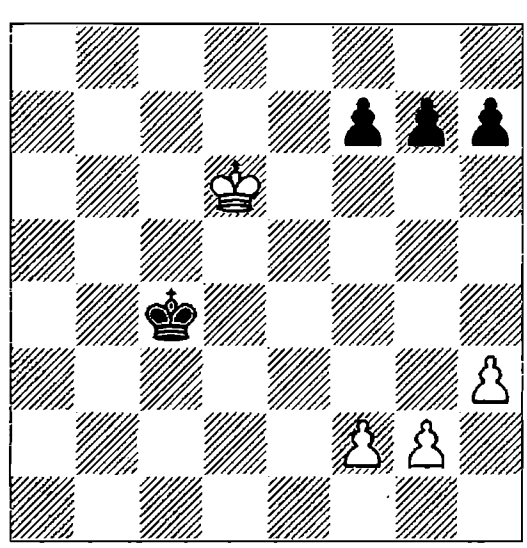
1) 5 ♔xh4?? even loses after 5...♔f4 6 g3+ (6 g4 f6 and mate next move) 6...♔xf3 7 g4 ♔f4 8 g5 ♔f5.

2) 5 ♔g4 f6! 6 ♔xh4 ♔f4 is a draw; for example, 7 g4 (not 7 g3+? ♔xf3 8 g4 ♔f4 9 g5 fxg5#) 7...♔xf3 8 g5 and now either 8...f5 stalemate or 8...fxg5+ 9 ♔xg5 ♔g3.

3) 5 f4+ ♔e4 6 f5 gxf5 7 ♔xh4 ♔f4! 8 ♔h5 ♔g3 9 ♔g5 f4 10 h4 f6+ 11 ♔f5 ♔xh4 is also drawn.

In some positions, both sides are able to rush their kings into the opposing pawn-mass, and this situation can amount to nothing more than a race. However, it is sometimes better to improve one's pawn-formation rather than mindlessly charging in with the king.

W



S. Kalinitschew – K.-J. Schulz
Cham 1992

White's king is one square nearer to the kingside pawns than Black's and it is White's turn to move. These factors certainly look as if they should be decisive, and analysis backs up this intuitive assessment. Surprisingly, though, the win is not at all automatic and the most

natural move, which was played in the game, only leads to a draw. In order to win, White has to find a rather counter-intuitive possibility.

1 ♔e7?

I imagine a great many players would choose this move, but it allows Black to reach a draw based on a queen vs f2-pawn position. It turns out that the key factor in determining the result of the position is whether Black can play ...f5, keeping his f-pawn so as to reach the type of draw described above. Once one appreciates this, it isn't too hard to find the only way to win: 1 g4!! ♔d3 (1...g6 2 ♔e5 ♔d3 3 ♔f6 ♔e2 4 ♔xf7 ♔xf2 5 g5 ♔g3 6 ♔g7 ♔h4 7 ♔h6 and 1...f5 2 gxf5 ♔d4 3 ♔e6 ♔e4 4 ♔f7 ♔xf5 5 ♔xg7 h5 6 ♔h6 also win for White) 2 ♔e7 f6 3 ♔f7 ♔e2 4 f4 ♔f3 5 f5 ♔g3 6 ♔xg7 ♔xh3 7 ♔xh7 ♔xg4 8 ♔g6 and the f6-pawn falls.

1...f5!

Black at once pinpoints the flaw in White's play and finds the unique drawing move.

2 ♔f7

2 ♔e6 ♔d3! 3 ♔xf5 ♔e2 4 f4 ♔f2 5 g4 ♔g3 also leads to a draw.

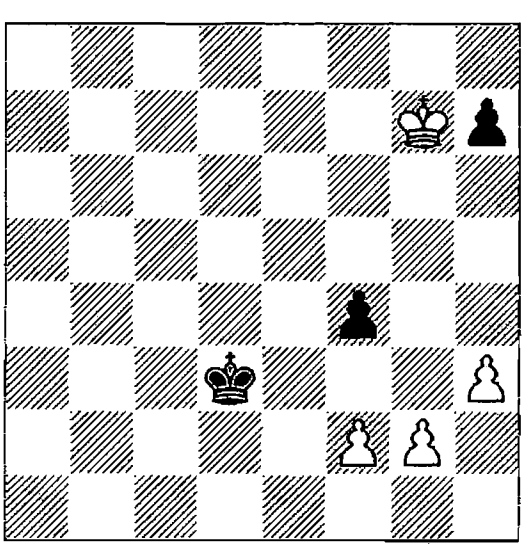
2...♔d3 3 ♔xg7

3 f4 ♔e4 4 ♔xg7 ♔xf4 5 ♔xh7 ♔g3 is another draw.

3...f4! *(D)*

Not 3...♔e2? 4 f4! ♔e3 5 ♔xh7 ♔xf4 6 ♔g6 and White wins.

W



4 ♔xh7

Or 4 ♔f6 ♔e2 5 f3 ♔f2 6 ♔f5 ♔xg2 7 ♔xf4 ♔xh3 8 ♔g5 ♔g3 9 f4 h6+ 10 ♔f5 h5 and both sides promote at the same time.

4...♔e2 5 g4 ♔xf2 6 g5 f3 7 g6 ♔g3!

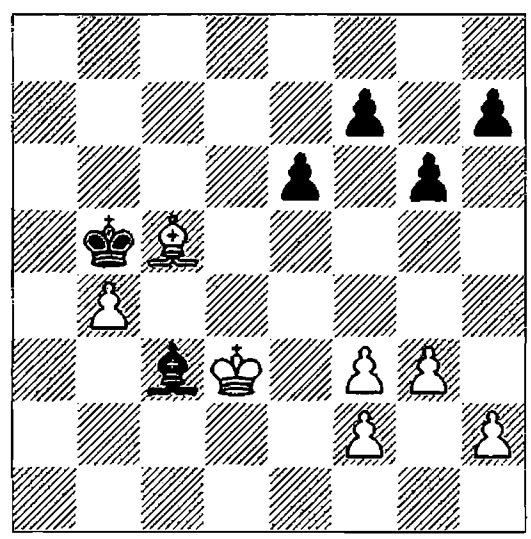
The simplest draw, eliminating White's h-pawn.

8 g7 f2 9 g8♕+ ♔xh3 ½-½

It's a standard theoretical draw.

The unexpectedly tricky nature of such positions can prove deceptive, and the following example proved too difficult for a FIDE World Champion, and for annotators Hecht and Ribli.

B



Anastasian – Khalifman
Erevan 1996

1...♗xb4

Liquidating to a king and pawn ending was condemned by Hecht in *ChessBase Magazine*, but there is nothing wrong with it. It is possible that Black could draw by other moves such as 1...♗e1 or 1...♗g7, but that is by no means sure.

The text-move has the advantage that it clarifies the situation and Black only needs to find a few accurate moves to secure the half-point. The disadvantage is that any error is likely to be instantly fatal.

2 ♗xb4 ♔xb4 3 ♔d4

Here Ribli commented that "Naturally White wins the pawn ending", but it is drawn.

3...f6!

The only move. 3...♔b3? loses to 4 ♔e5 ♔c3 5 ♔f6 ♔d3 6 ♔xf7 ♔e2 7 f4 ♔xf2 8 ♔xe6 ♔g2 9 g4 and the f-pawn is too quick.

4 f4 *(D)*

White's plan is to gain access to e5 for his king by playing g4-g5. He cannot start with 4 g4 because then 4...g5 is a clear draw.

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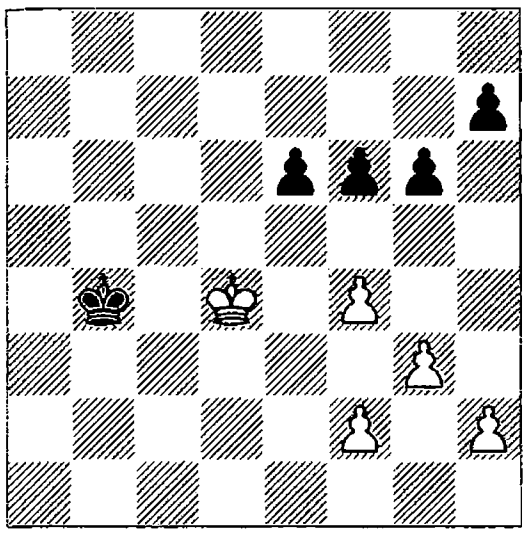

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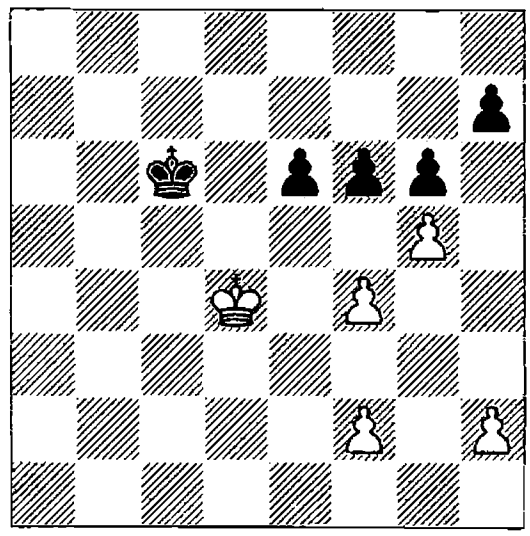

Black now faces a critical decision. He can play ...♔b5 at once, or first continue ...h5 and only after h3 play ...♔b5. The difference between these two lines is that in one the h-pawns remain on the board, while in the other they are exchanged. Perhaps it's not obvious that this makes a crucial difference, but only one of these two options saves the game.

4...♔b5?

The losing move, which neither Hecht nor Ribli commented on, although Postovsky gave the correct analysis in *Informator 66*. 4...h5! was the only move to draw. Now if White wants to play g4, he has to play h3 first and this leads to the exchange of h-pawns, which deprives White of his reserve tempi at a later stage. Play continues 5 h3 (after 5 f3 ♔b5 6 g4 hxg4 7 fxg4 ♔c6 8 h4 ♔d6 Black's king arrives in time to stop the h-pawn if White pushes h5) 5...♔b5 6 g4 hxg4 7 hxg4 ♔c6 8 g5 fxg5 9 fxg5 ♔d6 10 f4 ♔d7 11 ♔e5 ♔e7 and now we can see how the lack of h-pawns affects the position. Here White has no reserve tempo with his h-pawn and so cannot penetrate with his king.

5 g4!

Black is given no second chance; White gains the e5-square while keeping two reserve tempi with his h-pawn.

5...♔c6

Or 5...h6 6 g5 hxg5 (6...e5+ 7 ♔d5) 7 fxg5 fxg5 8 ♔e5 ♔c4 9 ♔xe6 ♔d3 10 ♔f6 and White wins after 10...g4 11 ♔xg6 ♔e2 12 ♔g5 or 10...♔e2 11 ♔xg6 ♔xf2 12 ♔xg5.

6 g5 *(D)*

6...e5+

The main line runs 6...fxg5 7 fxg5 ♔d6 8 f4 ♔d7 9 ♔e5 ♔e7 10 h3 (this is the point: with the h-pawns on the board White has two reserve tempi) 10...♔f7 11 ♔d6 ♔f8 (11...♔g7 12 ♔xe6 ♔f8 13 ♔f6 is similar) 12 ♔xe6 ♔e8 13 ♔f6 ♔f8 14 h4 ♔g8 15 h5 gxh5 16 ♔e7 h4 17 f5 h3 18 f6 and White wins.

7 fxe5 fxg5 8 f3

The simplest win, preventing Black from playing ...g4.

8...h5

8...h6 9 ♔c4 h5 10 ♔d4 is similar, since White just waits until Black runs out of pawn moves.

9 ♔c4 1-0

White wins after 9...♔c7 10 ♔d5 ♔d7 11 e6+ ♔e7 12 ♔e5 g4 13 fxg4 hxg4 14 ♔d5 ♔e8 15 ♔e4! (White moves to attack the g4-pawn, while being ready to meet ...♔e7 by ♔e5) 15...♔d8 16 ♔f4 ♔e7 (16...♔e8 17 ♔xg4 ♔e7 18 ♔g5 is also a win for White) 17 ♔e5 g5 18 ♔f5 and Black can resign.

Summary:

- Most positions are drawn when all the pawns are on one side and material is equal, but there are winning chances if one player can penetrate with his king amongst the enemy pawns.
- To create an entrance for the king, it is often necessary to advance pawns to punch holes in the enemy pawn-structure.
- It may be more important to improve the position of one's pawns rather than rush in with the king as quickly as possible.

2.7 Outside Passed Pawns

The strength of the outside passed pawn in king and pawn endings is drummed into chess-players by every textbook on the endgame. Using such a pawn, it is possible to deflect the defender's king away from the main mass of pawns, leaving a rich harvest for the attacker's king when it gets among the pawn-mass. There is a good deal of truth in this accepted wisdom, and in the first section below we shall look at cases in which the outside passed pawn lives up to its reputation. Yet this reputation is to some extent overstated, and in the following section we shall look at cases in which the outside passed pawn proves a hollow threat. The third section deals with an interesting practical case: one side has a powerful outside passed pawn, but the opponent has an extra pawn.

2.7.1 The Pawn Triumphant

In this section the outside passed pawn does not disappoint. Even if there is as yet no outside passed pawn, the advance of a pawn-majority can create one with decisive effect.

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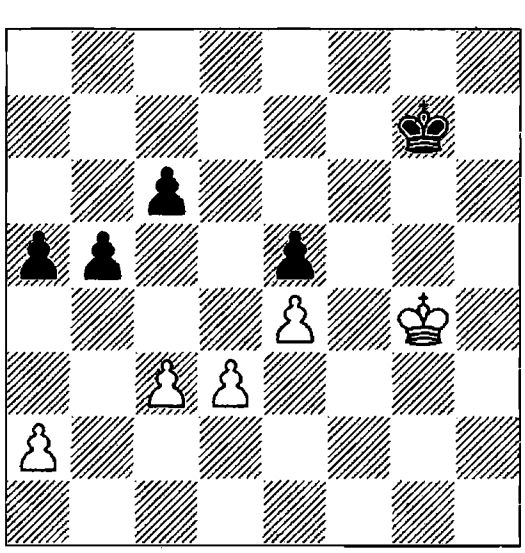


Damjanović – Dvoretsky
Vilnius 1978

This is slightly different from the standard example of an outside passed pawn, because the pawns are all in one mass, rather than being split between the two flanks. Yet even here the possibility for Black to create a passed pawn on the queenside proves decisive. The only asymmetrical element in the pawn-structure is that Black has a b-pawn while White has a d-pawn, which shifts the centre of gravity of the black pawns somewhat to the queenside. This enables Black to create a passed pawn by ...c5, ...b4 and so on. White's king has to move to the queenside to deal with this threat, and so Black's king is able to advance and attack White's pawns.

1...♔g6!

1...c5?? would be a blunder, losing to 2 ♔f5 b4 3 cxb4 cxb4 4 ♔xe5 a4 5 ♔d4 and the king arrives back in time to deal with Black's pawns, after which White's central passed pawns are decisive.

Contrary to Dvoretsky's notes in *Informator 26*, 1...♔f6! also wins after 2 ♔f3 c5 3 ♔e3, and now:

1) 3...b4? (the only move Dvoretsky considered) 4 cxb4 (not, however, Dvoretsky's 4 d4?, which loses to 4...exd4+ 5 cxd4 a4 – see below) 4...cxb4 (4...axb4 5 ♔d2) 5 d4 a4 6 dxe5+ ♔xe5 7 ♔d3 leads to a draw.

2) 3...a4! 4 d4 (4 ♔d2 b4 5 ♔c2 ♔g5 also wins for Black) 4...exd4+ 5 cxd4 b4 6 ♔d3 b3 7 axb3 a3 8 ♔c2 cxd4 and White cannot stop the pawns.

2 ♔f3

After 2 d4 exd4 3 cxd4 b4 Black promotes a queenside pawn.

2...c5 3 ♔e3

3 d4 cxd4 4 cxd4 b4! (not 4...exd4? 5 e5! ♔f5 6 e6 ♔xe6 7 ♔e4, when White draws) 5 ♔e3 a4 6 ♔d3 b3 7 axb3 a3 wins for Black.

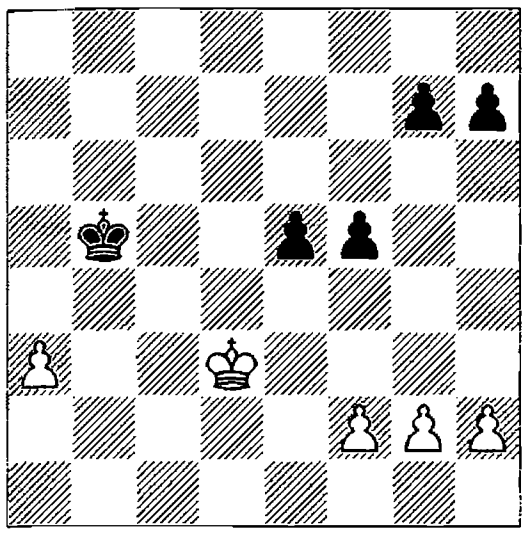
3...b4 4 d4

Or 4 cxb4 cxb4 5 ♔d2 a4 6 ♔c2 ♔g5 7 ♔d2 ♔f4 and the king penetrates.

4...cxd4+ 5 cxd4 a4! 6 ♔d3 b3 7 axb3 a3 8 ♔c2 exd4 9 b4 d3+ 0-1

Matters are not always so straightforward, however. In the following case (*see diagram on next page*) White has a more traditional outside passed pawn, but the result remains in doubt. The position is sufficiently complicated to have confused both players.

White has an outside passed pawn, but is this advantage sufficient to win? Acers annotated



Parsons – Acers
USA 1981

this ending in *Informator 33* but, as we shall see, his analysis needs modifying.

1 g4?

The exclamation mark given to this in *Informator* is misplaced, since it actually throws away the win. The first point to note is that the immediate deflection 1 a4+? doesn't win because after 1...♔xa4 2 ♔c4 e4 3 ♔d4 g6 White's king has to go all the way to h7 in order to start capturing Black's pawns; this takes so long that it would even lose and so White should force a draw with a move such as 4 g4. Therefore, White must first of all improve the situation on the kingside before throwing the a-pawn into the battle. The move White actually played was a drastic solution to the problem, offering a pawn in order to create an opening for his king to penetrate. However, we shall see that this plan allows Black to draw. Instead, White should have played to improve the kingside situation more slowly, and combined this with threats to advance the a-pawn. In this case I believe that White wins; for example, 1 h4! (the simplest, although 1 f3 followed by h4 also wins in a similar way) 1...g6 (1...♔a4 2 f3 ♔b3 3 h5 g6 4 a4 ♔xa4 5 hxg6 hxg6 6 ♔c4 wins for White) 2 f3 ♔c5 (2...h6 allows White to win by 3 a4+ ♔xa4 4 ♔c4 now that Black has weakened the g6-pawn by playing ...h6; for example, 4...e4 5 fxe4 fxe4 6 ♔d4 ♔b4 7 ♔xe4 ♔c4 8 ♔e5 ♔d3 9 ♔f6) 3 ♔c3 (threatening a4) 3...♔b5 4 ♔b3 ♔a5 5 ♔c4 ♔a4 6 ♔d5 ♔xa3 7 ♔xe5 and White wins.

1...g6?

Curiously, Acers did not analyse acceptance of the sacrifice, even though this leads to a comfortable draw: 1...fxg4 2 ♔e4 ♔a4 3 ♔xe5 ♔xa3 4 ♔e6 ♔b3 5 ♔f7 ♔c4 6 ♔xg7 ♔d3 7 ♔xh7 ♔e2 and all the pawns disappear.

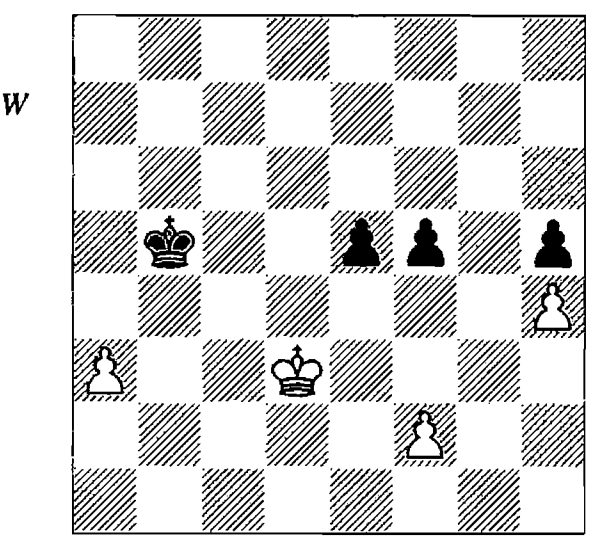
2 gxf5 gxf5

Now Black's kingside pawns have been weakened and White should have no problems winning.

3 h4!

3 ♔c3 is also effective.

3...h5 *(D)*



4 a4+?

Just when White had achieved a winning position, he throws it away with this premature check. As Acers pointed out, White could have won by 4 ♔c3! ♔c5 (4...e4 5 ♔d4, 4...f4 5 ♔d3 and 4...♔a4 5 ♔c4 ♔xa3 6 ♔d5 e4 7 ♔e5 are all easily won for White) 5 a4 e4 6 a5 f4 7 a6 ♔b6 8 ♔d4 e3 9 fxe3 fxe3 (9...f3 10 ♔d3 ♔xa6 11 e4 also wins for White) 10 ♔xe3 ♔xa6 11 ♔f4 ♔b6 12 ♔g5 ♔c6 13 ♔xh5 ♔d7 14 ♔g6 and Black is one tempo too slow.

4...♔xa4 5 ♔c4 e4!

Now Black is in time to meet ♔xf5 with ...♔d3.

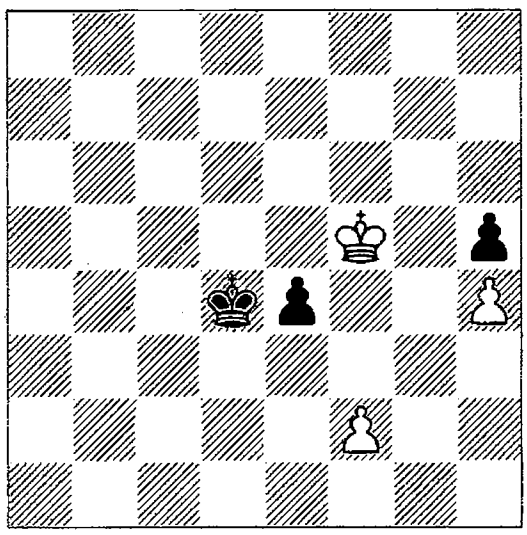
6 ♔d4 ♔b3 7 ♔e5 ♔c2 8 ♔xf5 ♔d3 9 ♔f4

Or 9 ♔e5 e3 with a draw.

9...♔d4 10 ♔f5 *(D)*

10...♔d5??

Acers makes no comment on this move, which is actually a losing blunder. Black can draw by either 10...e3 or 10...♔d3, repeating the position.


B

11 ♔g5 ♔e5 12 ♔xh5 ♔f5

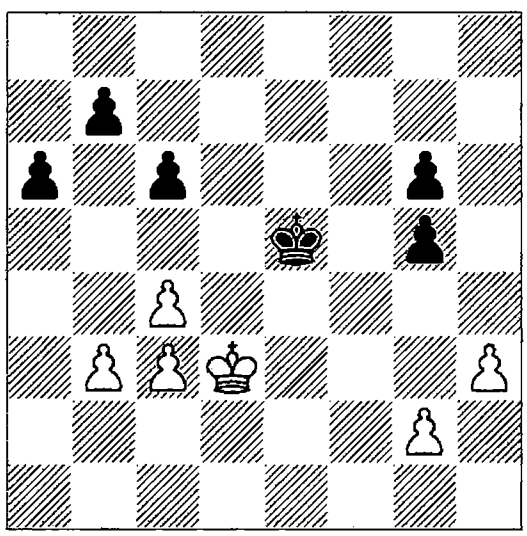
Or 12...♔f4 13 ♔g6 ♔f3 14 ♔f5 and White wins easily.

13 ♔h6 ♔g4 14 h5??

Handing the half-point back again. White could have won by 14 ♔g6! ♔f3 (14...♔xh4 15 ♔f5 is also hopeless for Black) 15 ♔f5.

14...♔f3 15 ♔g6 ♔xf2 16 h6 e3 17 h7 e2 18 h8♕ e1♕ ½-½

In the next position, no outside passed pawn is visible, nor is there a pawn-majority. Despite this, Black's lurking threat of creating a passed a-pawn gives him a winning position.


W

Vogt – Liebert

East German Ch, Schwerin 1969

In this example, Black's doubled g-pawns are not a significant weakness, but White is doomed by his poor queenside pawn-structure. The reason is that Black can create an outside passed pawn by ...a5, ...b5 and ...a4. This will deflect White's king to the queenside and allow Black's king to penetrate amongst White's kingside pawns.

1 g3

Other moves are no better; for example:

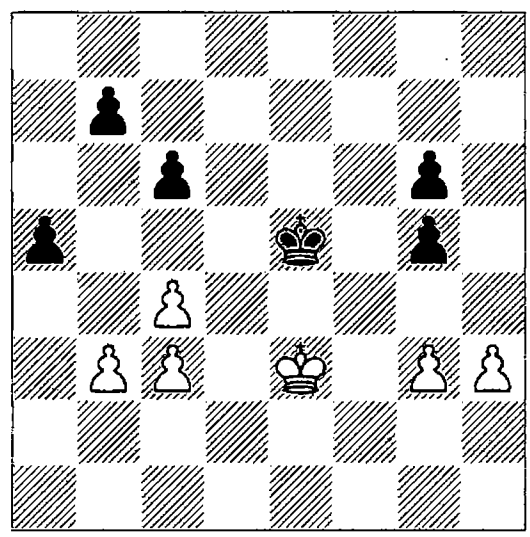
1) 1 ♔e3 a5 2 ♔f3 (2 g3 transposes to 2 ♔e3 below) 2...b5 3 cxb5 cxb5 4 ♔e3 a4 5 bxa4 bxa4 6 ♔d3 ♔d5 and the outside passed pawn decides.

2) 1 c5 ♔f4 2 ♔e2 ♔g3 3 ♔f1 a5 4 ♔g1 ♔f4 5 ♔f2 ♔e4 6 ♔e2 ♔d5 7 b4 axb4 8 cxb4 ♔c4 and Black wins.

3) 1 b4 c5 followed by ...b6 and ...a5 again gives Black an outside passed pawn.

1...a5 2 c5

Another critical continuation is 2 ♔e3 *(D)*, which also demands accurate play from Black:


B

1) 2...b5? 3 ♔d3 a4 4 cxb5 cxb5 5 bxa4! bxa4 6 ♔c4 g4 (or 6...♔e4 7 ♔b4 ♔d3 8 ♔xa4 ♔xc3 9 ♔b5 and White is just in time) 7 hxg4 g5 8 ♔b4 ♔d5 9 c4+ ♔d4 10 c5 ♔d5 11 ♔b5 a3 12 c6 a2 13 c7 a1♕ 14 c8♕ is a draw.

2) 2...g4! 3 hxg4 (3 h4 b5 4 ♔d3 a4 5 cxb5 cxb5 6 bxa4 bxa4 7 ♔c4 ♔e4 8 ♔b4 ♔d3 9 ♔xa4 ♔xc3 10 ♔b5 is now a loss as Black can promote his g4-pawn) 3...g5 4 ♔d3 b6! (an important finesse; White is now in zugzwang since he must prevent ...♔e4, but moving the king away from the queenside gives Black a vital extra tempo) 5 ♔e3 b5 6 ♔d3 a4 7 cxb5 cxb5 and now:

2a) 8 ♔c2 a3 9 ♔b1 ♔e4 10 ♔c2 (Black wins easily after 10 ♔a2 ♔d3 11 ♔xa3 ♔xc3)

10...♔f3 11 ♔b1 ♔xg3 12 c4 bxc4 13 b4 ♔f3 14 b5 c3 15 b6 ♔e2 16 b7 ♔d1 17 b8♕ c2+ 18 ♔a2 c1♕ 19 ♕b3+ ♔e2 and Black will swap queens on b2, with an easily winning ending.

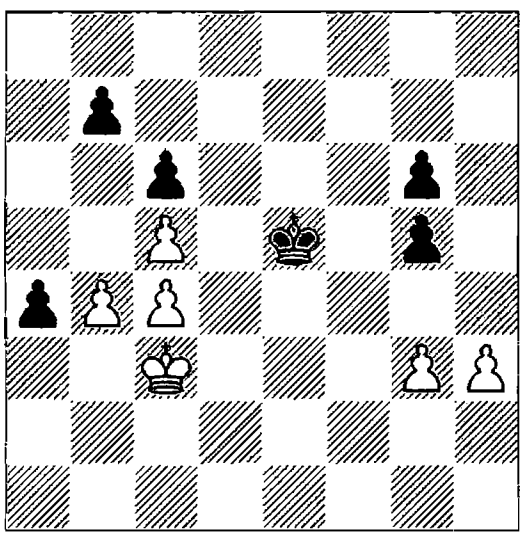
2b) 8 bxa4 bxa4 9 ♔c4 ♔e4 10 ♔b4 ♔d3 11 ♔xa4 ♔xc3 12 ♔b5 ♔d4 13 ♔c6 ♔e4 14 ♔d6 ♔f3 is the key variation; Black's pawn sacrifice has changed the kingside pawn-structure in his favour, in that taking on g3 and then on g4 defends the g5-pawn, whereas taking on g3 and then h3 didn't.

2...♔d5 3 b4 a4

In this line too, the outside passed pawn proves decisive.

4 c4+ ♔e5 5 ♔c3 *(D)*

B



5...g4!

White had set a vicious trap, which Black cleverly avoided. After the obvious 5...♔e4? 6 ♔b2 ♔f3 7 g4! ♔g3 8 ♔a3 ♔xh3 9 ♔xa4 ♔xg4 10 ♔a5 ♔f4 (it doesn't make any real difference where Black moves his king) 11 ♔b6 g4 12 ♔xb7 g3 13 b5 g2 14 bxc6 g1♕ 15 c7 Black is unable to win as he can never force White's king in front of the c7-pawn, nor can he reach a winning queen and pawn ending. The preliminary sacrifice deprives White of his reserve tempo on the kingside, and now Black can win by playing his king to the queenside rather than the kingside.

6 hxg4 g5 7 ♔b2 ♔d4 8 ♔a3 ♔c3! 0-1

The finish might be 9 ♔xa4 ♔xc4 (Marić gave 9...♔b2?? in *Informator*, but this loses to 10 ♔a5) 10 ♔a3 ♔c3 11 ♔a4 ♔b2 12 ♔a5 ♔b3 13 b5 ♔c4 14 bxc6 bxc6 15 ♔b6 ♔d5 and now we see how important it was to deprive White of his spare tempo on the kingside.

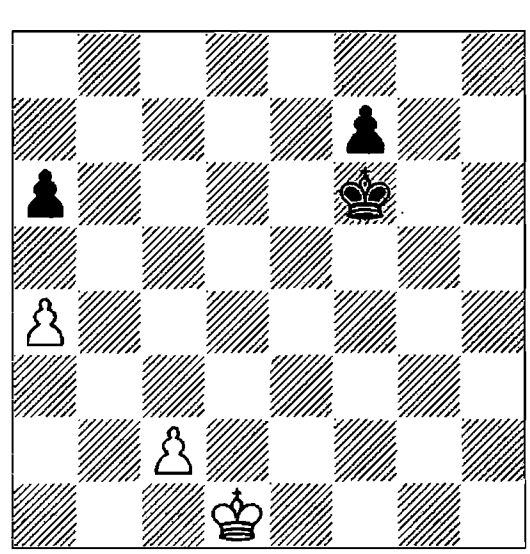
Summary:

- An outside passed pawn can be a powerful weapon, drawing the enemy king away from the defence of the remaining pawns.
- Much depends on whether the attacker's king can quickly penetrate into the pawn-mass on the opposite flank to the passed pawn. Sometimes it is necessary to advance pawns to create an opening for the king.
- A pawn-majority that can produce an outside passed pawn may be almost as effective as the passed pawn itself.

2.7.2 Who's Afraid of the Outside Passed Pawn?

Our treatment of outside passed pawns has thus far been rather typical of endgame books in general, but now we depart from the traditional script. After emphasizing the power of outside passed pawns, most books then pass straight on to the next topic. The consequence of this is that most players have an over-inflated idea of the strength of outside passed pawns. As we have seen, there are indeed many positions in which such a pawn gives a decisive advantage, but there are also many positions in which it does not. In this section we shall explore some of the situations in which an outside passed pawn loses its effectiveness.

W



Mnatsakanian – Vogt
Stary Smokovec 1979

At first sight this is a standard outside passed pawn win, with Black using his f-pawn to deflect the white king while Black's own king gobbles up White's queenside pawns; indeed, so standard did it to appear to Mnatsakanian that he resigned at this point (**0-1**). However, as Minev pointed out in *Informator*, the position is actually a draw. If the outside passed pawn were on the g- or h-file, then Black would indeed win, but in this position White can take the f-pawn and still make it back to the queenside in time to stop Black's a-pawn.

1 ♔e2

At this stage, White doesn't even have to be particularly accurate. He can also draw by 1 ♔d2, 1 c3, 1 ♔e1 or 1 a5.

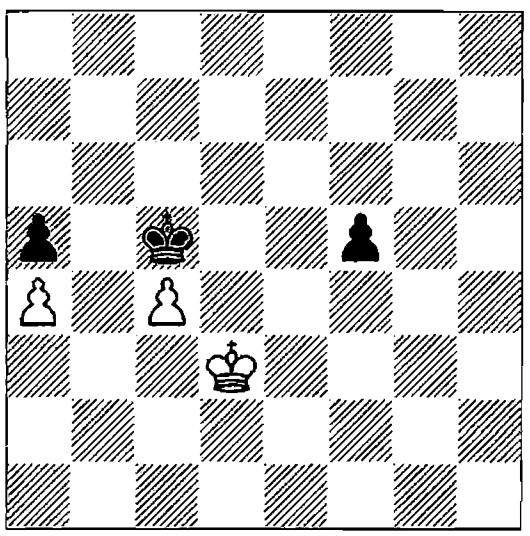
1...♔e5 2 ♔d3 ♔d5

2...f5 3 c4 f4 4 c5 ♔d5 5 a5 ♔xc5 6 ♔e4 ♔b5 7 ♔xf4 ♔xa5 8 ♔e3 ♔b4 9 ♔d2 ♔b3 10 ♔c1 is a typical drawing line in which White saves the game by one tempo.

3 c4+ ♔c5 4 ♔c3 a5 5 ♔d3 f5 *(D)*

Not 5...♔b4?, when White even wins by 6 ♔d4 ♔xa4 7 c5 ♔b5 8 ♔d5 a4 9 c6 ♔b6 10 ♔d6 a3 11 c7 a2 12 c8♕ a1♕ 13 ♕b8+, picking up the queen with a skewer.

W



6 ♔c3 f4 7 ♔d3 f3

7...♔b4 8 ♔e4 ♔xa4 9 ♔xf4 ♔b4 10 ♔e3 a4 11 ♔d2 also leads to a draw.

8 ♔e3 ♔xc4

Or 8...♔b4 9 ♔xf3.

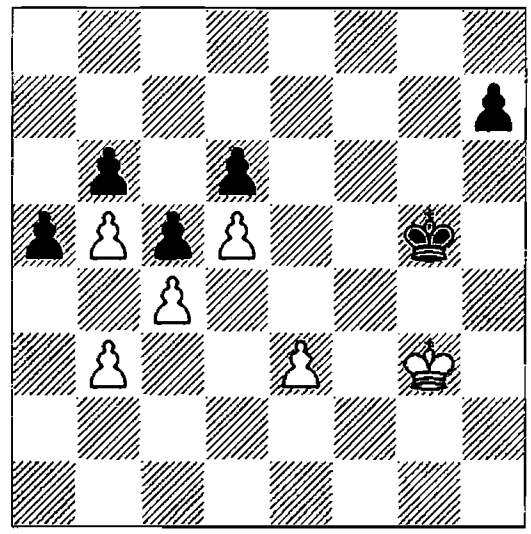
9 ♔xf3 ♔b4 10 ♔e3 ♔xa4 11 ♔d2 ♔b3 12 ♔c1

with a draw.

In this position there were two factors that enabled White to draw. The first is that Black's only pawn on the queenside was an a-pawn, so it was only necessary for the white king to return to c1 to save the game. The second was that the outside passed pawn wasn't as far away as it might have been, so that the journey to take the f-pawn and still return to c1 was within the range of White's king.

The next position is rather different. The outside passed pawn is on the edge of the board, and there are plenty of pawns on the opposite flank, but it's a draw for a different reason.

W



Kirov – Ermenkov
Sofia 1973

Black has an outside passed pawn and at first sight the win should be simple. He pushes the h-pawn, deflects the white king, marches with his king to take the e3- and b3-pawns and then promotes his a-pawn. However, one aspect of the position favours White: he only needs to take the relatively close d6-pawn in order to create a passed pawn of his own. Another factor, which is not obviously relevant in the diagram position, is the weakness of the b6-pawn. These compensating factors mean that White is just able to hold the position, although accurate play is necessary.

1 ♔h3!!

It was quite an achievement for White to find the only move to save the game. Other moves lose:

1) 1 ♔f3? ♔f5 2 ♔g3 ♔e4 3 ♔g4 h6! reaches a position of reciprocal zugzwang. It's

clear that White loses if he is to play, but it's not so obvious that Black can only draw if it is his move. However, the position after 4...♔xe3 5 ♔f5 h5 occurs later in the game and we shall see there why it is drawn.

2) 1 e4? and now:

2a) 1...♔f6? 2 ♔g4 ♔e5 3 ♔g5 is a position of reciprocal zugzwang with Black to play. The result is a draw after 3...♔xe4 4 ♔f6 h5 5 ♔e6 h4 6 ♔xd6 h3 7 ♔c7 h2 8 d6 h1♕ 9 d7, much as in the game (Black's king is on e4 instead of e3, but this makes no difference).

2b) 1...h5? is given as winning by Minev and Milić in *Informator 15*, but actually it allows White to escape: 2 ♔f3! (2 ♔h3? ♔f4 3 ♔h4 ♔xe4 4 ♔xh5 ♔d3 5 ♔g5 ♔c3 6 ♔f6 ♔xb3 7 ♔e6 a4 8 ♔xd6 a3 9 ♔c7 a2 10 d6 a1♕ 11 d7 ♕f6 wins for Black) 2...h4 3 e5 dxe5 4 d6 e4+ 5 ♔xe4 ♔f6 6 ♔d5 h3 7 ♔c6 h2 8 ♔c7 h1♕ 9 d7 with the same type of positional draw as in the game.

2c) 1...h6! (this is the winning move) 2 ♔f3 (2 e5 dxe5 3 ♔f3 ♔f5 is similar) 2...♔f6 3 ♔f4 h5 4 e5+ dxe5+ 5 ♔f3 ♔f5 6 ♔g3 e4 and Black wins easily.

1...♔f5

1...h6 2 ♔g3 ♔f5 3 ♔h4 ♔e4 4 ♔g4 is one of the above reciprocal zugzwangs with Black to play.

2 ♔h4 ♔e4 3 ♔g5 ♔xe3 4 ♔f5!

It takes too much time to go for the h-pawn, so White must create his own passed pawn as quickly as possible.

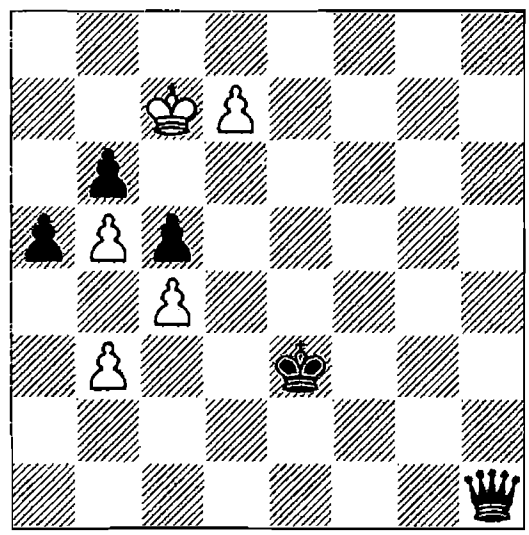
4...h5

This is the only chance, since if Black runs for the b-pawn, White promotes first.

5 ♔e6 h4 6 ♔xd6 h3 7 ♔c7 h2 8 d6 h1♕ 9 d7 *(D)*

It is perhaps surprising that Black cannot win here, but this is the point at which the weakness of b6 enters the picture. Black cannot force the white king in front of the d-pawn and the best he can do is transfer his queen to e7 with gain of tempo. Then he has a free move before he has to exchange queens on d8. If Black's pawn were on a7 instead of a5, then the resulting king and pawn ending would be winning for Black, but as it is, White is in time to take on b6 and create a passed b-pawn.

B

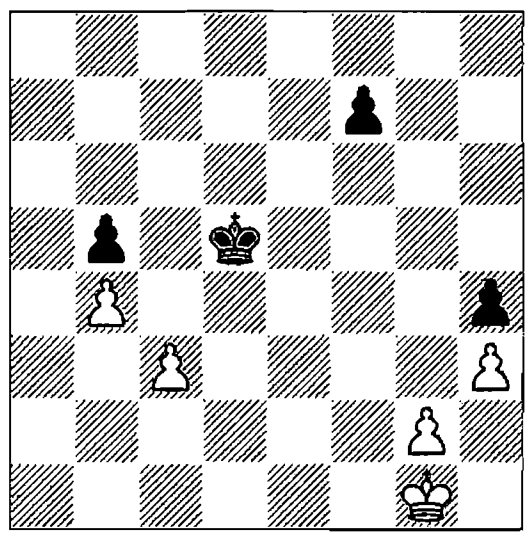


9...♕h2+ 10 ♔c8 ♕h3 11 ♔c7 ♕g3+ 12 ♔c8 ♕g4 13 ♔c7 ♕f4+ 14 ♔c8 ♕f5 15 ♔c7 ♕e5+ 16 ♔c8 ♕e6 17 ♔c7 ♕e7 18 ♔c8 ½-½

After 18...♔d3 19 d8♕+ ♕xd8+ 20 ♔xd8 a4! (20...♔c3?! 21 ♔c7 ♔xb3 22 ♔xb6 a4 23 ♔xc5 a3 24 b6 a2 25 b7 a1♕ 26 b8♕+ ♔c2! is also drawn, but it would be a tough task to defend this over the board) 21 bxa4 ♔xc4 22 ♔c7 ♔b4 23 ♔xb6 c4, the draw is clear.

In the next position, White could choose to make an outside passed pawn on either side of the board, but in the game he picked the wrong one.

W



Lutz – Nisipeanu
Bundesliga 2005/6

White is a pawn up, but has two backward pawns. He can create a passed b-pawn by playing c4, or a passed h-pawn by playing g3. Which plan is correct?

1 ♔f2 ♔e4 2 ♔e2

The immediate 2 g3? is wrong, because after 2...hxg3+ 3 ♔xg3 ♔e3 Black's f-pawn is just as dangerous as White's h-pawn. Instead, White must manoeuvre to find a better opportunity for playing g3.

2...♔e5

Or 2...f6 3 ♔d2 f5 4 ♔c2! and White wins after 4...♔e5 5 ♔d3 ♔d5 6 c4+ bxc4+ 7 ♔c3 f4 8 b5 or 4...f4 5 c4 bxc4 6 b5 ♔d5 7 ♔c3 ♔c5 8 b6.

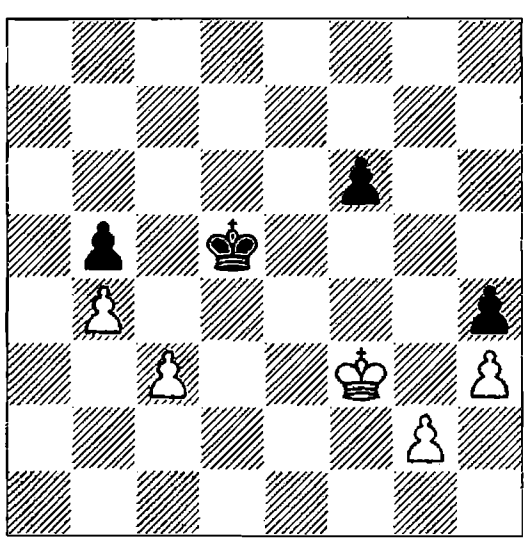
3 ♔e3

3 ♔f3 f5 4 ♔e3 ♔d5 5 ♔f4 is also an easy win because Black is in zugzwang; after 5...♔c4 6 g3 hxg3 7 ♔xg3 (Black's king cannot now move to e4) 7...♔xc3 8 h4 ♔xb4 9 h5 the h-pawn is too fast.

3...♔d5 4 ♔f3 f6 *(D)*

After 4...♔c4 5 g3 White wins easily.

W



5 ♔f4?!

It often happens that a player makes his life more difficult with an inaccuracy, and only then makes a result-changing blunder. Here White could have won at a stroke by 5 g3! hxg3 6 h4 ♔e5 7 ♔xg3 ♔e4 (7...♔f5 8 ♔f3) 8 h5 ♔f5 9 ♔h4 ♔e6 10 ♔g4 and there are no more problems. In the game White decided to play his king to the queenside and create a passed pawn with c4, but this does not win.

5...f5

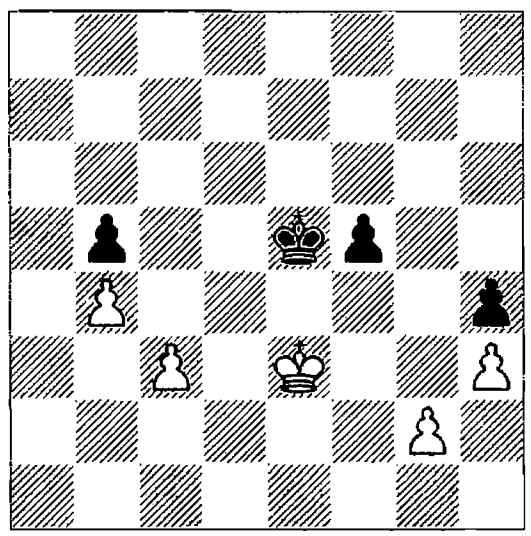
Now we have the same position as in the note to White's third move, but here it is White to play. He can still win but it is more difficult, as he must first triangulate with his king.

6 ♔e3

6 ♔xf5 only leads to a drawn ending of ♕+h♙ vs ♕.

6...♔e5 *(D)*

W



7 ♔d3?

White has become confused and goes the wrong way with his king. He could have won on the kingside by completing the triangulation: 7 ♔f3 ♔d5 (7...f4 8 ♔g4 ♔e4 9 ♔xh4) 8 ♔f4, transposing into the note to White's third move.

7...♔f4!

Black seizes his chance to force a draw.

8 c4

8 ♔e2 ♔g3 9 ♔f1 f4 10 ♔g1 f3 11 gxf3 ♔xf3 is an easy draw, so White has no choice.

8...bxc4+ 9 ♔xc4?!

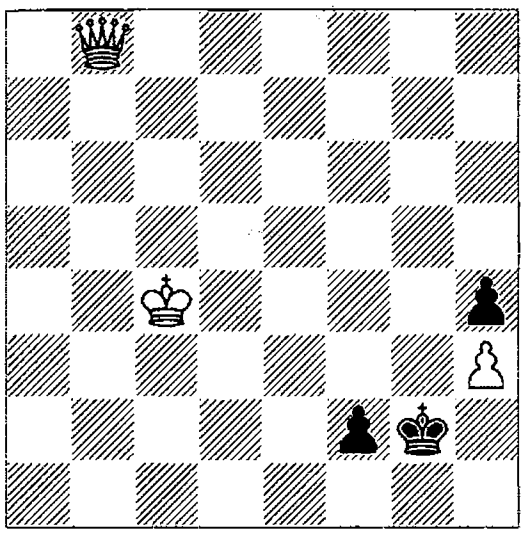
Other moves also lead to a draw, but would have offered more practical chances:

1) 9 ♔c3 ♔g3 10 b5 ♔xg2 11 b6 f4 12 b7 f3 13 b8♕ f2 14 ♕b7+ (14 ♕g8+?! ♔xh3 is an immediate draw, so when the king is on g2, White has to check on the long diagonal) 14...♔g1 15 ♕g7+ ♔h2 16 ♕f6 ♔g2 17 ♕c6+ ♔g1 18 ♕c5 ♔g2 19 ♕d5+ ♔g1 20 ♕g8+ ♔h2 21 ♕xc4 (by means of a careful sequence of checks, White has managed to take the c-pawn with tempo) 21...♔g2 22 ♕xh4 f1♕ 23 ♕g4+ ♔h2 24 h4 and, while the position is a draw, in practice White would have some justification in playing on.

2) 9 ♔d4 and now 9...c3! 10 ♔xc3 ♔g3 11 b5 ♔xg2 is simplest, with the same draw as in the game. Black doesn't have to play ...c3 at once and can delay it for a couple of moves, but

if he waits too long then he will lose; for example, 9...♔g3 10 b5 ♔xg2 11 b6 f4? (this was the last chance for ...c3) 12 b7 f3 13 b8♕ f2 14 ♕g8+ ♔xh3 (14...♔h2 15 ♕xc4 ♔g2 16 ♔e3 f1♕ 17 ♕xf1+ ♔xf1 18 ♔f3 and White wins) 15 ♕e6+ ♔h2 16 ♕f5 ♔g2 17 ♕g4+ ♔h2 18 ♕xh4+ ♔g2 19 ♕g4+ ♔h2 20 ♕f3 ♔g1 21 ♕g3+ ♔f1 (Black has to move to f1 because the pawn on c4 destroys the usual stalemate) 22 ♔e3 and White wins.

9...♔g3 10 b5 ♔xg2 11 b6 f4 12 b7 f3 13 b8♕ f2 *(D)*



The position is a draw since White's king is too far away; indeed, since Black can promote with check, White's winning chances are even less than after 9 ♔c3.

14 ♕b7+ ♔g1 15 ♕g7+ ♔h2 16 ♕f6 ♔g2 17 ♕g5+

17 ♕xh4 f1♕+ is an easy draw, while 17 ♕c6+ ♔h2 18 ♕f3 ♔g1 19 ♕e3 ♔g2 is also drawn as White cannot make progress.

17...♔xh3

17...♔h2 also draws, but this the move played is the simplest.

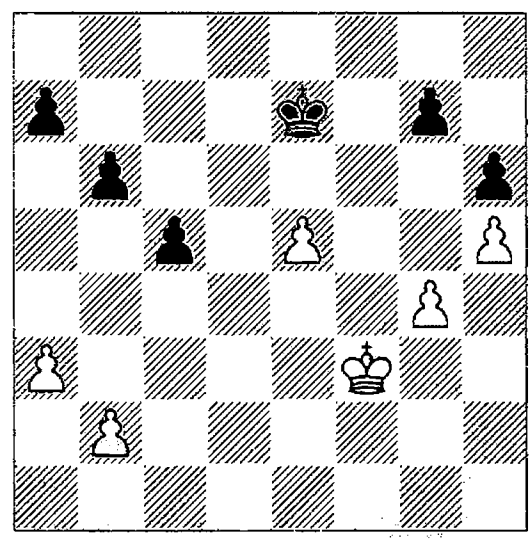
18 ♕f4 ♔g2 19 ♕g4+ ♔h2 20 ♕xh4+ ♔g1

White's king is one square outside the winning zone.

21 ♕g3+ ♔h1 22 ♕xf2 ½-½

It's stalemate.

We have already mentioned that the defender has better chances against an outside passed pawn when the attacker's last pawn is a rook's pawn. In the next example, despite falling into a dubious position White could have held the game had he spotted a neat idea converting his opponent's g-pawn into an h-pawn.



T. Horvath – Wockenfuss
Hamburg 1980

Black has a queenside pawn-majority which, given enough time, will allow him to create an outside passed pawn. However, at the moment White is not worse since he can easily create counterplay on the kingside.

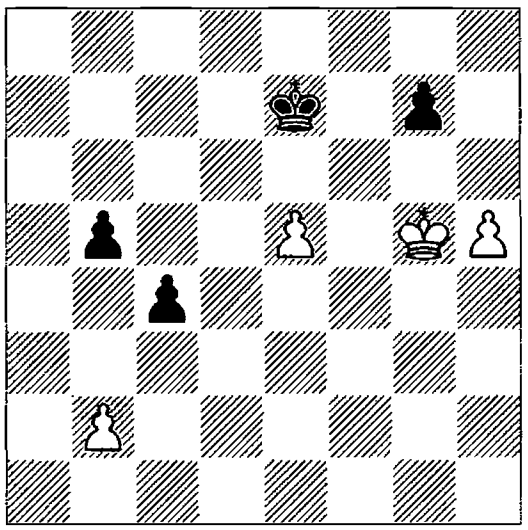
1 a4 a6 2 g5?!

After this White has to take a little care to reach the draw. 2 ♔f4! was sounder and after 2...♔e6 (not 2...b5? 3 axb5 axb5 4 ♔f5 b4 5 ♔e4 c4 6 ♔d4 and White even wins) 3 g5 hxg5+ (not 3...b5? 4 gxh6 gxh6 5 axb5 axb5 6 ♔e4 and White wins after 6...c4 7 ♔d4 or 6...b4 7 b3 c4 8 bxc4 b3 9 ♔d3 ♔xe5 10 ♔c3) 4 ♔xg5 b5 5 ♔g6 c4 6 ♔xg7 b4 7 h6 c3 8 bxc3 bxc3 9 h7 c2 10 h8♕ c1♕ White is even a pawn up in the queen ending. However, it's an easy draw as Black's king is actively placed and the e5-pawn is vulnerable; for example, 11 ♕e8+ ♔f5 12 ♕g6+ ♔xe5 13 ♕xa6 ♕c7+ 14 ♔g6 ♕d6+.

2...hxg5 3 ♔g4 b5 4 axb5 axb5 5 ♔xg5 c4 *(D)*

6 ♔g6?

This mistake costs White the game. Although the two players promote at the same time, Black has the first check and can use it to launch a mating attack. White could still have drawn by 6 ♔f5! b4 7 ♔e4 c3 8 bxc3 bxc3 9 ♔d3 ♔e6 10 ♔xc3 ♔xe5 11 ♔d3 ♔f5 12 h6!, converting



Black's g-pawn into an h-pawn, after which the draw is obvious.

6...b4 7 ♔xg7 c3 8 bxc3 bxc3 9 h6 c2 10 h7 c1♕ 11 h8♕ ♕g5+

Black first wins the e-pawn with check.

12 ♔h7 ♕h5+ 13 ♔g7

Or 13 ♔g8 ♕f7#.

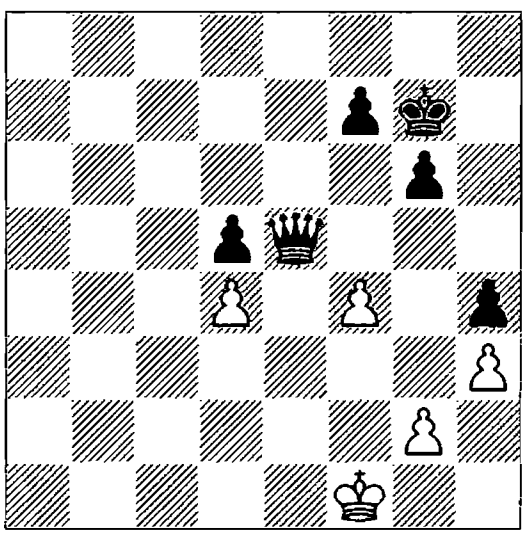
13...♕xe5+ 14 ♔g8 ♕e6+ 15 ♔g7

15 ♔h7 ♕e4+ 16 ♔g7 ♕g4+ transposes.

15...♕g4+ 16 ♔h6 ♕h4+ 0-1

17 ♔g7 ♕g5+ 18 ♔h7 ♔f7 leads to a quick mate.

The propaganda about outside passed pawns sometimes leads players to make the wrong decision when liquidating into a pawn ending.



Flear – Huss
Chiasso 1991

White faces a typical over-the-board decision: which pawn should he recapture with? The answer isn't obvious, but the result of the game should depend on it. Flear's notes in *Informator 52* claim that both captures lose, but one of them draws.

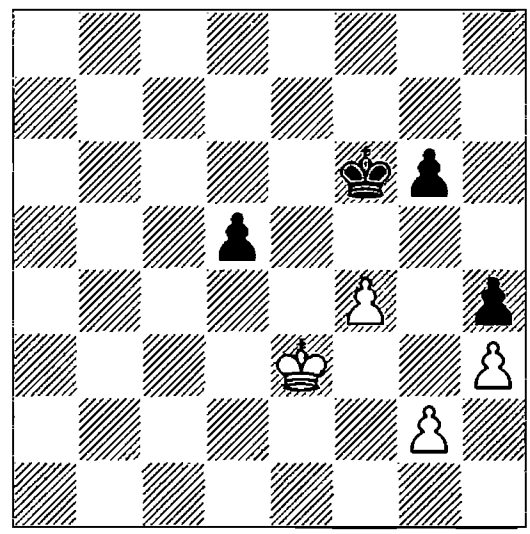
1 fxe5?

The wrong choice, after which Black has a winning position. The correct capture 1 dxe5! may look wrong, as it gives Black an outside passed pawn, but it is relatively close to the pawn-mass and this enables White to hold the game. Black can try:

1) 1...g5? 2 f5 is not equal, as Flear gives, but winning for White.

2) 1...♔f8 2 ♔f2 ♔e7 3 g4! hxg3+ 4 ♔xg3 ♔e6 5 ♔f3 ♔f5 6 ♔e3 leads to a draw after 6...d4+ 7 ♔xd4 ♔xf4 8 ♔d5 ♔f5 9 h4 or 6...g5 7 fxg5 ♔xe5 8 ♔f3 ♔f5 9 ♔e3! ♔xg5 10 ♔d4.

3) 1...f6! (the most troublesome move) 2 ♔f2 ♔f7 (2...fxe5 3 fxe5 ♔f7 4 ♔f3 ♔e6 5 ♔f4 is an easy draw) 3 ♔e3! (3 g3? fxe5 4 fxe5 ♔e6 5 gxh4 ♔xe5 6 ♔e3 d4+ 7 ♔d3 ♔d5 8 ♔d2 ♔e4 9 ♔e2 ♔f4 10 ♔d3 ♔g3 11 ♔xd4 ♔xh3 wins for Black) 3...♔e6 4 exf6 (not 4 ♔d4? fxe5+ 5 fxe5 g5) 4...♔xf6 *(D)*.



We have reached a key moment at which White must choose the correct square for his king in order to draw: 5 ♔f3! (it is surprising that White only draws by moving away from Black's passed pawn, but the right strategy is to wait until the pawn is further advanced before attacking it; 5 ♔d4? loses to 5...♔e6 6 ♔d3 ♔d7 7 ♔c3 ♔c6 8 ♔d4 ♔d6 9 ♔d3 ♔c5 and White is gradually forced backwards) 5...♔e6 (5...♔f5 6 ♔e3 is a position of reciprocal zugzwang; if

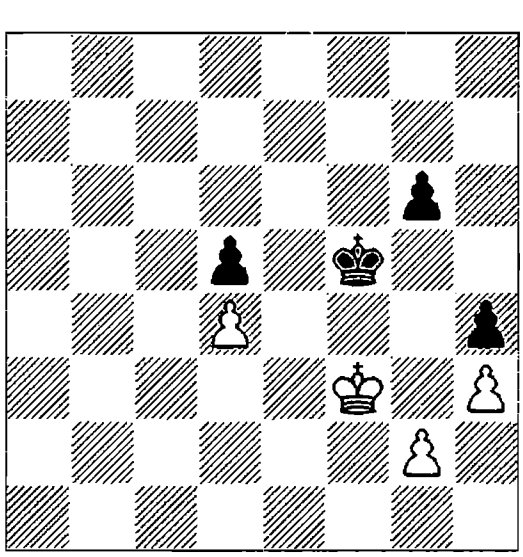
Black is to play, he can only draw after 6...d4+ 7 ♔f3 – it's still not time to take the pawn – 7...d3 8 ♔e3 d2 9 ♔xd2 ♔xf4 10 ♔e2 ♔g3 11 ♔f1) 6 g3 (not 6 ♔e3? ♔f5, when the reciprocal zugzwang arises with White to play) 6...hxg3 7 ♔xg3 ♔f5 (7...d4 8 ♔f3 ♔d5 9 h4 ♔c4 10 f5 is also drawn) 8 ♔f3 d4 9 h4! (White is saved by his reserve tempo) 9...d3 10 ♔e3 d2 11 ♔xd2 ♔xf4 12 h5! gxh5 13 ♔e2 and White holds the draw.

1...f6?

This move lets White off very easily. Black could have won by advancing his king: 1...g5! (1...♔h6!, followed by ...♔g5-f5 and ...g5, wins the same way) 2 ♔f2 ♔g6 3 ♔f3 (3 g4 hxg3+ 4 ♔xg3 ♔h5! 5 ♔h2 ♔h4 6 ♔g2 g4 7 hxg4 ♔xg4 and Black wins easily) 3...♔f5 4 g4+ (4 ♔e3 g4 leaves White without a reasonable move) 4...hxg3 5 ♔xg3 ♔e4 6 ♔g4 ♔xd4 7 ♔xg5 (after 7 e6 fxe6 8 ♔xg5 ♔e4 9 h4 d4 10 h5 d3 11 h6 d2 12 h7 d1♕ 13 h8♕ ♕g1+ Black forces the exchange of queens and wins) 7...♔xe5 8 h4 ♔e6! (8...f6+? 9 ♔g6 d4 10 h5 d3 11 h6 d2 12 h7 d1♕ 13 h8♕ ♕g4+ 14 ♔f7 is only a draw because White's pieces cooperate well in an attack on Black's pawn) 9 h5 ♔e7 10 ♔f5 (10 h6 ♔f8 11 ♔f6 ♔g8 12 ♔e5 ♔h7 13 ♔xd5 ♔xh6 14 ♔e4 ♔g5 and Black wins) 10...f6! 11 ♔g6 ♔f8 12 ♔h7 d4 13 h6 d3 14 ♔h8 d2 15 h7 ♔e7 16 ♔g8 d1♕ 17 h8♕ ♕d5+ and Black mates in a few moves.

2 exf6+ ♔xf6 3 ♔f2 ♔f5 4 ♔f3 *(D)*

B



Black's more active king gives him a slight advantage but it is not enough to win.

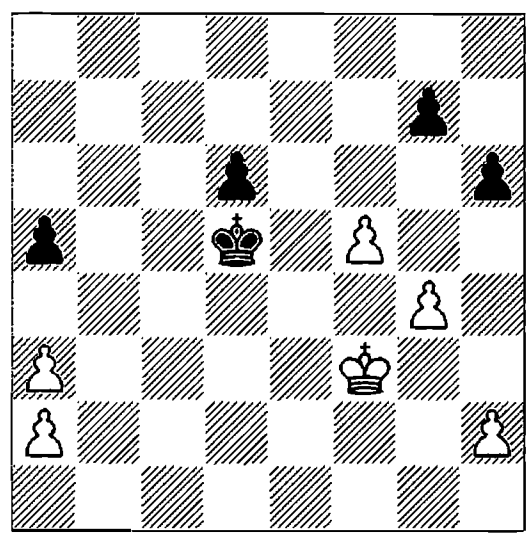
4...g5 5 g4+ hxg3 6 ♔xg3 ♔e4 7 ♔g4 ♔xd4 8 ♔xg5 ♔e4 9 h4 d4 10 h5 d3 11 h6 d2 12 h7 d1♕ 13 h8♕ ♕g1+

White has only one move not to lose the queen, but one is enough.

14 ♔h6 ½-½

The following example is especially deceptive.

B



Flear – Hergott
London 1987

If you enter this position into your computer, you will probably find that it gives White an advantage; after all, he is a pawn up and can create an outside passed pawn on the kingside. However, the position is winning not for White but for Black, which your computer may see if you leave it on long enough. The point is that with Black's king on e5 White cannot advance his kingside pawns very far, because once White plays h4, Black will reply ...h5 undermining the pawns. Indeed, Black's plan is eventually to run White out of tempi and force him to push his h-pawn. The two important factors here are Black's active king position and the protruding pawn on f5, which makes it impossible for White to mobilize his pawn-majority.

1...♔e5

An essential preliminary since otherwise White plays ♔f4 and then starts pushing his kingside pawns with h4, g5, etc.

2 a4

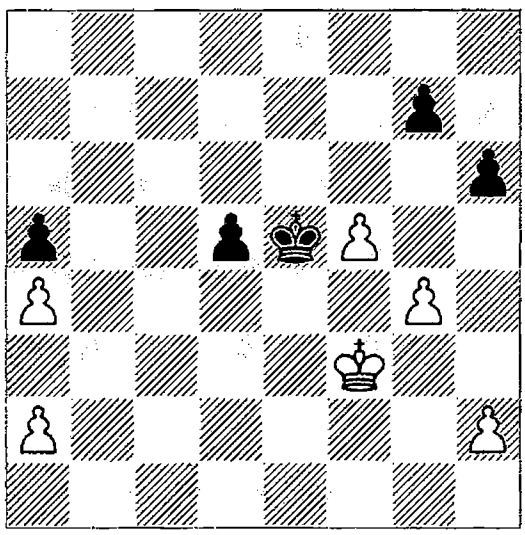
The best chance, gaining space on the queenside. 2 ♔e3 a4! keeps the white a-pawns further

back and thereby gains time if White should make a run for Black's a-pawn. Then Black wins more easily; for example, 3 ♔f3 d5 4 ♔e3 d4+ 5 ♔d3 ♔d5 6 ♔d2 (6 h4 ♔e5 7 ♔c4 ♔e4 8 g5 hxg5 9 f6 gxf6 10 h5 ♔f5 and Black wins) 6...♔e4 7 ♔e2 d3+ 8 ♔d2 ♔d4 9 ♔d1 ♔e3 10 ♔e1 ♔f4 11 h3 ♔g3 and the kingside pawns fall.

2...h5?

Black misses his chance and allows White to escape with a draw. 2...d5! *(D)* was the winning move.

W



Now:

1) After 3 h4 h5 Black breaks up the kingside pawns and wins at once.

2) 3 h3 d4! 4 a3 and now:

2a) Flear's notes in *Informator 44* recommend 4...h5?, but then White can draw by 5 gxh5! (but not 5 ♔g3? d3 6 ♔f3 d2 7 ♔e2 hxg4 8 hxg4 ♔f4 and Black wins) 5...♔xf5 6 ♔e2 ♔g5 7 ♔d3 ♔xh5 8 ♔xd4 ♔h4 9 ♔e5 ♔xh3 10 ♔f5, etc.

2b) 4...♔d5! 5 h4 ♔e5! (now that White has weakened himself by playing h4, Black can threaten ...h5) 6 h5 d3 7 ♔e3 d2 8 ♔xd2 ♔f4 9 ♔d3 ♔xg4 10 ♔c4 ♔xf5 11 ♔b5 g6 and Black wins as promotion on h1 prevents promotion on a8.

3) 3 ♔e3 d4+ 4 ♔d3 (4 ♔f3 ♔d5 5 ♔e2 ♔e4 6 a3 d3+ 7 ♔d2 ♔d4 and Black wins much as in the note to White's second move) 4...♔d5 5 h3 ♔e5 (Black just waits until eventually White is forced to play h4) 6 a3 ♔d5 7 h4 ♔e5 8 h5 ♔f4 and Black wins.

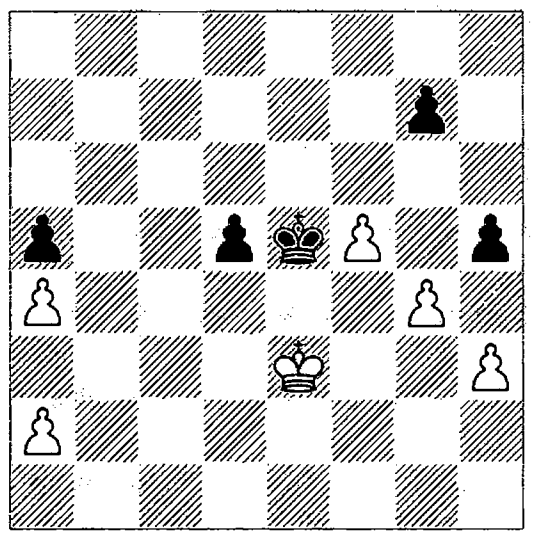
The move chosen is a mistake, since it is wrong to play ...h5 before White has weakened himself with h4.

3 h3

3 gxh5 ♔xf5 4 ♔e3 also draws, much as in line 2a of the previous note.

3...d5 4 ♔e3 *(D)*

B

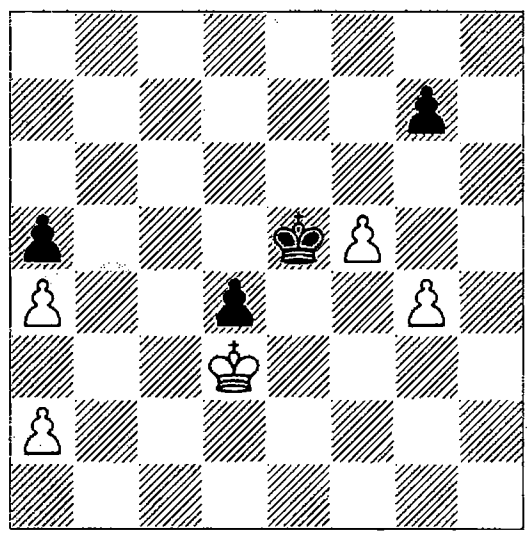


4...hxg4

Black has weakened himself by playing ...h5, and so the waiting strategy that succeeded in the note to his second move no longer works: if 4...d4+ 5 ♔d3 ♔d5?, then 6 gxh5 ♔e5 7 h6 gxh6 8 f6 ♔xf6 9 ♔xd4 ♔g5 10 ♔c4 and White promotes first.

5 hxg4 d4+ 6 ♔d3 *(D)*

B



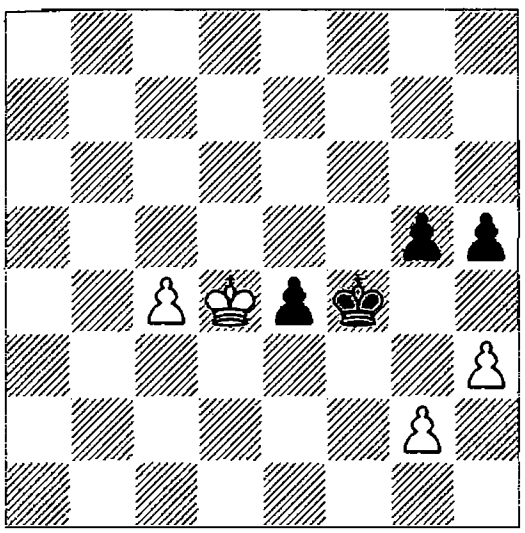
6...♔f4

Black correctly decides to force a draw.

7 ♔xd4 ♔xg4 8 ♔e4 ♔g5 9 ♔e5 ♔g4 10 ♔e4 ½-½

In our final example of this section, Black found a remarkable defence against the outside passed pawn based on a transformation into a queen ending.

B



Andres – Vilela
Havana 1992

White's passed c-pawn is going to be hard to stop, while Black's e-pawn cannot get any further than e3 directly because ...e3 is met by ♔d3. However, Black's other kingside pawns are sufficiently far advanced to provide some counterplay, and with accurate defence this turns out to be just enough to draw.

1...g4!

1...e3? 2 ♔d3 g4 3 hxg4 h4 (3...hxg4 4 c5 ♔e5 5 ♔xe3 ♔d5 6 ♔f4 and White wins easily) fails to 4 ♔e2! and Black's counterplay is dead.

2 hxg4

The most obvious and best move. The alternatives are:

1) 2 c5? even loses after 2...gxh3 3 gxh3 e3 4 ♔d3 ♔f3 5 c6 e2 6 c7 e1♕ 7 c8♕ ♕d1+ and White's queen falls to a skewer.

2) 2 h4?! e3 3 ♔d3 ♔g3 4 ♔xe3 ♔xg2 5 c5 ♔h2 6 c6 g3 7 c7 g2 8 c8♕ g1♕+ 9 ♔e2 is drawn, but with Black having marginally the better of the draw.

2...h4!

The key point. Black intends to play ...h3, to free the f3-square so that his king can support the e-pawn. 2...hxg4? loses after 3 c5 e3 4 ♔d3 ♔e5 5 ♔xe3.

3 g5!

The only move not to lose. After 3 c5? e3 4 ♔d3 h3! 5 gxh3 ♔f3 White will lose his queen as before.

3...e3 4 ♔d3

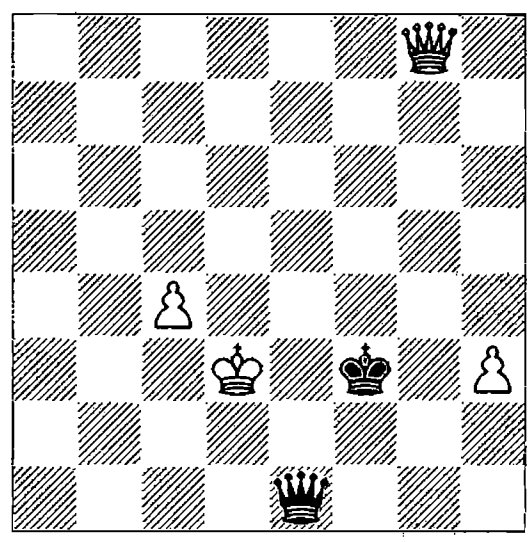
4 g6 e2 5 g7 e1♕ 6 g8♕ ♕d2+ 7 ♔c5 ♕a5+ is an easy draw as Black can even afford to exchange queens.

4...h3!

Breaking through to the f3-square.

5 gxh3 ♔f3 6 g6 e2 7 g7 e1♕ 8 g8♕ *(D)*

B



Black's counterplay has done its job and although he is now two pawns down in a queen ending, he should have no trouble forcing a draw. Black has the first check and, with White's queen stuck right on the edge of the board, there will be no escape for the white king.

8...♕e3+

This and 8...♕e4+ are the only moves to draw. Black must give perpetual check immediately or White's material advantage will prove decisive.

9 ♔c2 ♕f2+!

9...♕e2+ 10 ♔b3 ♕e3+ 11 ♔a4 ♕a7+ 12 ♔b5 ♕b7+ 13 ♔c5 ♕c7+ 14 ♔d5 ♕d7+ 15 ♔e5 ♕c7+! also draws, but the text-move is simpler.

10 ♔c3 ♕e3+ 11 ♔b2

11 ♔b4 ♕b6+ doesn't help White.

11...♕f2+ 12 ♔a3 ♕a7+ 13 ♔b3 ♕b6+ ½-½

Summary:

An outside passed pawn is no guarantee of victory, and there are several situations in which

the defender has chances of countering an outside passed pawn or outside pawn-majority:

- The passed pawn, although outside, is close to the pawn-mass (see Flear-Huss and to a lesser extent Mnatsakanian-Vogt).
- The attacker is left with just a rook's pawn (Mnatsakanian-Vogt and Horvath-Wockenfuss).
- The attacker's own pawns are vulnerable to attack (Kirov-Ermenkov).
- The limited material means that the defender can draw even if the attacker promotes first (Lutz-Nisipeanu).
- The attacker's pawn-majority cannot easily create a passed pawn (Flear-Hergott).
- The defender can secure counterplay with his own passed pawn (Andres-Vilela).

More than one of these may apply at the same time.

2.7.3 Outside Passed Pawn vs Extra Pawn

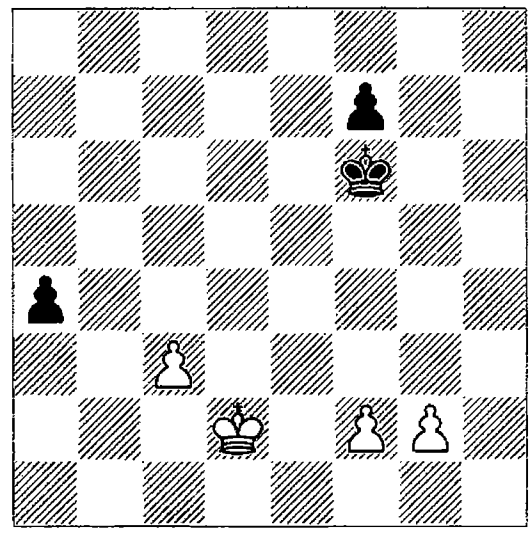
It often happens in practice that the defender is a pawn down, but has an outside passed pawn. In this case the outside passed pawn may suffice to draw despite the material disadvantage. The basic idea is similar to that with equal material: the passed pawn draws the enemy king to the edge of the board, leaving the pawns on the other side of the board vulnerable to attack. Because of the initial material disadvantage, the defender will be **two** pawns down on the other side of the board, and his king will have to work hard to round up the attacker's pawns.

In the following diagram, White is a pawn ahead, but the win is no trivial matter as Black has an outside passed pawn. Using this, it might be possible for Black to draw by forcing the exchange of a-pawn for c-pawn, leaving his king closer to the kingside pawns. White has three methods of moving his king towards the a-pawn: he can play ♔c2-b2-a3, ♔d3-c4-b4 or c4 and ♔c3-b4. Each of these requires four moves to take the a-pawn, but only one of them wins. Which one?

1 ♔c2?

The wrong choice, allowing Black to escape with a draw. Here are the alternatives:

W



L. Dominguez – Pogorelov
Ubeda 2001

1) 1 f4? ♔f5 2 g3 ♔e4 3 ♔c2 ♔f3 4 c4 ♔e4 5 ♔c3 f5 6 ♔b4 ♔d4 7 c5 a3 and Black draws easily.

2) 1 c4? ♔e5 2 ♔c3 a3 3 ♔b3 (3 f4+ ♔e4! 4 f5 a2 5 ♔b2 ♔d4 6 g4 ♔xc4 7 g5 ♔d5 is a typical drawing line; Black takes the c-pawn and still makes it back in time to stop the kingside pawns) 3...♔d4 4 ♔xa3 ♔xc4 5 f3 ♔d3 6 ♔b4 ♔e3 7 ♔c5 ♔f2 is a draw.

3) 1 g4? attempts to advance the kingside pawns to create a second passed pawn, but it weakens the pawns too much:

3a) 1...♔e5? now loses: 2 g5! ♔e4 (2...♔f5 loses to 3 ♔d3! ♔xg5 4 ♔c4 ♔f4 5 ♔b4, but not 3 ♔c2? ♔e4 with a position of reciprocal zugzwang in which White to move can only draw after 4 ♔b2 ♔d3 5 f4 ♔e4! 6 ♔a3 ♔xf4 7 c4 ♔xg5) 3 ♔c2 (now the reciprocal zugzwang arises with Black to play) 3...a3 4 ♔b3 ♔d3 5 f4 ♔e4 6 c4 ♔d4 (6...♔xf4 7 c5 ♔e5 8 ♔xa3 also wins for White) 7 f5 ♔e5 8 g6 fxg6 9 fxg6 ♔f6 10 c5 and one pawn promotes.

3b) 1...♔g5! (the only move to draw) 2 ♔d3 (or 2 f3 ♔f4) 2...♔xg4 3 ♔c4 ♔f3 4 ♔b4 ♔xf2 5 c4 a3 6 ♔xa3 f5 7 c5 f4 8 c6 f3 9 c7 ♔g1 10 c8♕ f2 and Black is saved.

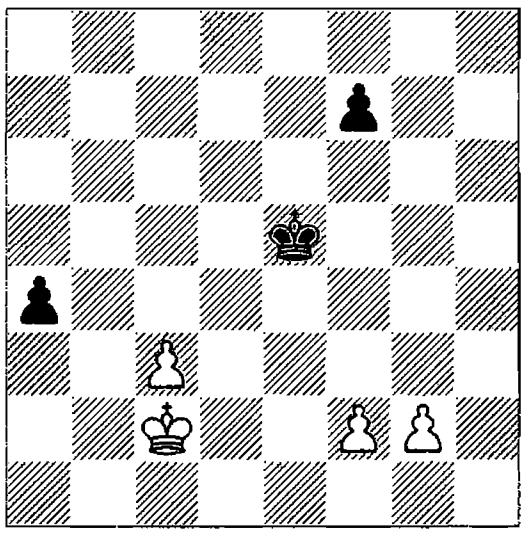
4) 1 f3? is another attempt to advance the kingside pawns, but without creating the weaknesses of line 3. After 1...♔e5 2 g4 (2 ♔d3 ♔d5 3 g4 a3 4 ♔c2 ♔c4 5 g5 a2 6 ♔b2 a1♕+ 7 ♔xa1 ♔xc3 is a draw, while 2 ♔c2 ♔d5 transposes to the note to Black's second move in the game) 2...♔f4 3 c4 ♔e5 4 ♔c3 a3 5 g5 a2 6

♔b2 ♔d4 7 f4 ♔xc4 8 f5 ♔d5 again Black is in time.

5) 1 ♔d3! (this is the winning move; White's king approaches the a-pawn, while keeping Black's king at bay) 1...♔e5 2 ♔c4 ♔e4 3 f3+! (gaining a crucial tempo, since now once Black has taken the c-pawn, his king has to go to f2 before he is threatening to take a pawn; 3 ♔b4? ♔d3 4 ♔xa4 ♔xc3 5 ♔b5 ♔d3 6 ♔c6 ♔e2 7 f4 ♔e3! 8 g3 ♔f3 9 ♔d6 ♔xg3 is a draw) 3...♔e3 (thanks to the position of White's king, Black is unable to improve his own king position in response to White's check) 4 ♔b4 ♔d3 5 ♔xa4 ♔xc3 6 ♔b5 ♔d3 7 ♔c6 ♔e3 8 ♔d6 ♔f2 9 f4 ♔xg2 10 f5 and White wins.

1...♔e5 *(D)*

W



2 f3

Other moves are no better: 2 ♔b2 ♔d5 3 ♔a3 ♔c4 4 ♔xa4 ♔xc3 is an immediate draw, while after 2 g4 ♔f4 3 ♔b2 (3 g5 ♔e4! transposes into the analysis of 1 g4?) 3...♔e4! (3...♔xg4? loses to 4 ♔a3) 4 g5 ♔d3 (threatening ...a3+) 5 f4 ♔e4! (the back and forth manoeuvres of Black's king seem strange at first, but here Black is exploiting the fact that with the pawn on f4, he can take White's kingside pawns and still make it back to stop the c-pawn) 6 ♔a3 ♔xf4 7 c4 ♔xg5 8 ♔xa4 ♔f6 9 ♔b5 ♔e7 Black defends.

2...♔f4?

A fatal error. Black could have drawn by 2...♔d5! 3 g4 (3 f4 ♔e4 4 g3 ♔f3 is also a draw) 3...♔e5! 4 ♔b2 (after 4 g5 ♔f4 5 c4 ♔e5! 6 ♔c3 a3 7 ♔b3 ♔d4 Black takes the c-pawn in good time to get back to the kingside) 4...♔f4 5 ♔a3 ♔xf3 6 ♔xa4 (or 6 c4 ♔xg4 7 c5 ♔f5 8 ♔xa4 ♔e6 9 ♔b5 ♔d7 10 ♔b6 ♔c8 and Black arrives back just in time) 6...♔xg4 7 c4 ♔f5 8 ♔b5 ♔e6 9 ♔b6 ♔d7 10 ♔b7 ♔d6.

3 ♔b2

Now White is winning and makes no further mistake.

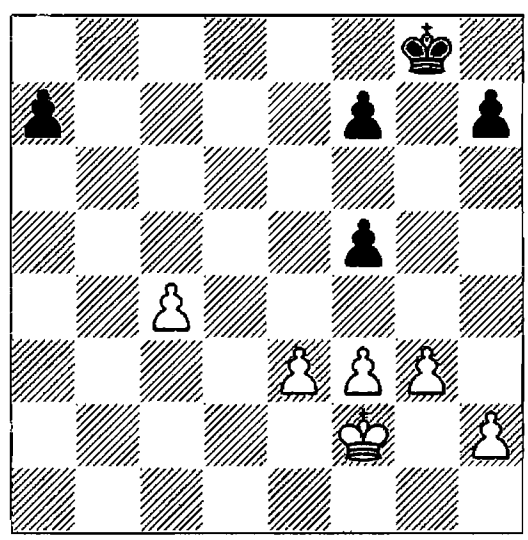
3...♔e3 4 ♔a3 ♔d3 5 ♔xa4 ♔c4

5...♔xc3 6 ♔b5 ♔d3 7 ♔c6 ♔e3 transposes.

6 ♔a5 ♔xc3 7 ♔b5 ♔d4 8 ♔c6 ♔e3 9 ♔d6 ♔f2 10 f4 ♔g3 11 f5 ♔f4 12 f6 1-0

The following example is similar in structure, in that Black has a passed a-pawn, while White has a passed c-pawn plus an extra pawn on the kingside. In the previous example, the position was a win, but White made a mistake allowing a draw, but here the opposite happens: the position is a draw, but Black makes a mistake allowing White to win.

B



Serper – Zugić
North Bay 1998

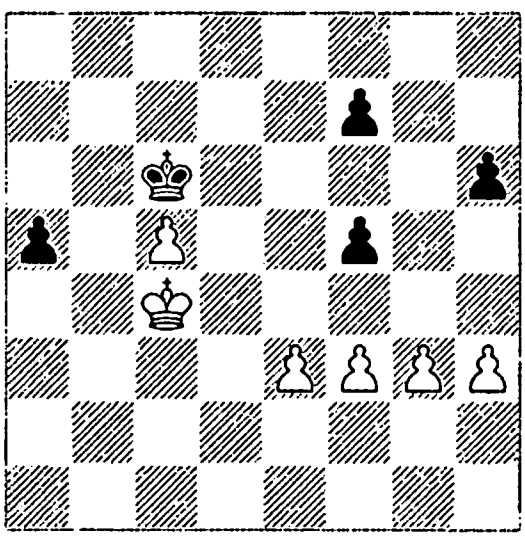
This is a complex endgame. White is a pawn up and Black's pawn-structure is broken, so there is no doubt that White has whatever winning chances there are, but Black's outside passed pawn is a powerful counterbalance. It is easy to see how the result might be a draw: the a-pawn deflects the white king, Black takes the c-pawn with his own king and in the resulting position Black's king is nearer the remaining pawns, enabling him to draw comfortably. Indeed, if White doesn't do something special, this

scenario is likely to become reality. White's winning chances depend largely on the time element: can he activate his kingside pawns and make another passed pawn there before Black takes the c-pawn and runs back with his king? It turns out that everything depends on a single tempo, and so it is necessary for both sides to play precisely.

1...♔f8?

This loses a tempo which ultimately costs the game. By delaying ...a5, Black allows White to play e4, thereby opening a short path for his king to reach the important central square d4. He should have pushed the a-pawn first, forcing White to play ♔e2, after which it always takes the king an extra move to reach d4: 1...a5! 2 ♔e2 ♔f8 3 ♔d3 (3 e4 fxe4 4 fxe4 ♔e7 5 ♔d3 ♔d6 6 ♔d4 a4 leaves White a tempo down on the game, which gives Black a simple draw) 3...♔e7 4 ♔d4 ♔d6 5 c5+ ♔c6 6 ♔c4 h6! (Black must take care as after 6...a4? 7 ♔b4 a3 8 ♔xa3 ♔xc5 9 ♔b3 ♔b5 10 ♔c3 ♔c5 11 h3 h5 12 ♔d3 ♔d5 13 h4 White wins with the extra pawn, while after 6...h5? 7 h3 f6 8 h4 Black is to play in a position of reciprocal zugzwang and loses after 8...a4 9 ♔b4 a3 10 ♔xa3 ♔xc5 11 ♔b3) 7 h3 *(D)* and now:

B



1) 7...h5 (the simplest) 8 g4 (8 h4?! f6 9 e4 fxe4 10 fxe4 a4 11 ♔b4 a3 12 ♔xa3 ♔xc5 is fine for Black) 8...fxg4 9 fxg4 hxg4 (9...h4 10 g5 a4 11 ♔b4 a3 12 ♔xa3 ♔xc5 13 ♔b3 ♔d5 14 ♔c3 ♔e4 15 ♔d2 ♔f5 is also a draw) 10 hxg4 a4 (10...f6 11 e4 a4 12 e5 fxe5 13 g5 a3 14 ♔b3 e4 15 g6 e3 16 g7 e2 17 g8♕ e1♕ is another draw) 11 ♔b4 a3 12 ♔xa3 ♔xc5 13 ♔b3 ♔d5 14 ♔c3 ♔e4 15 ♔d2 ♔f3 16 g5 ♔g4 with a clear draw.

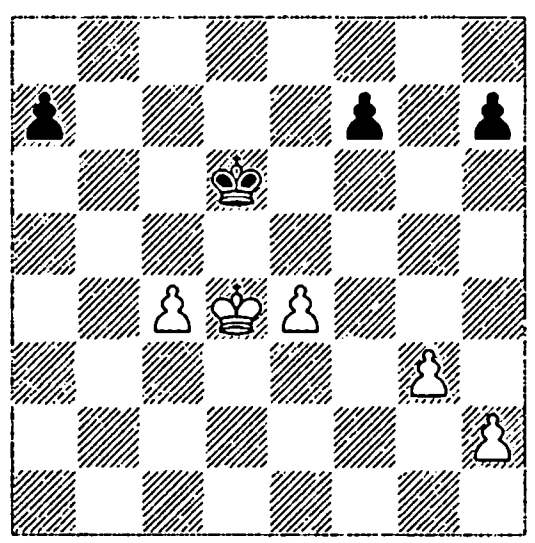
2) Contrary to Serper's analysis, 7...f6 also draws after 8 g4 fxg4 9 hxg4 (9 fxg4 a4 10 ♔b4 a3 11 ♔xa3 ♔xc5 12 ♔b3 ♔d5 13 ♔c3 ♔e4 14 ♔d2 ♔f3 is also drawn) 9...a4 10 ♔b4 f5! (not 10...a3?, losing to 11 ♔xa3 ♔xc5 12 ♔b3 f5 13 ♔c3 fxg4 14 fxg4 ♔d5 15 ♔d3) 11 gxf5 (11 ♔xa4 ♔xc5 12 ♔b3 fxg4 13 fxg4 ♔d5 draws) 11...a3! 12 f6 (12 ♔xa3? ♔xc5 wins for Black) 12...a2 13 f7 a1♕ 14 f8♕ ♕b2+ 15 ♔c4 ♕c2+ 16 ♔d4 ♕d2+ 17 ♔e4 ♕d5+ 18 ♔f4 ♕g5+ with perpetual check.

2 e4!

White at once hits on the defect of Black's last move and opens a path to d4 for his king, while at the same time taking the first step towards the creation of another passed pawn on the kingside.

2...fxe4 3 fxe4 ♔e7 4 ♔e3 ♔d6 5 ♔d4 *(D)*

B



White's king occupies a dominant central post, while Black hasn't as yet touched his a-pawn. By pushing his g- and h-pawns, White will set the stage for e5-e6, creating a passed pawn on the g- or h-file.

5...a5

5...f6 also loses after 6 g4 (6 c5+? ♔c6 7 ♔c4 a5 8 g4 a4 9 h4 a3 is a draw as Black is too quick) 6...a5 7 h4 h6 (7...a4 8 g5 fxg5 9 hxg5 a3 10 ♔c3 ♔c5 11 e5 also wins for White) 8 e5+! fxe5+ 9 ♔c3 e4 10 g5 hxg5 11 hxg5 a4 12 g6 ♔e6 13 c5 a3 14 g7 ♔f7 15 c6 a2 16 ♔b2 e3 17 c7 e2 18 g8♕+ and White wins by a single tempo.

6 e5+ ♔c6

Going the other way is no better: 6...♔e6 7 ♔c5! (not 7 c5? a4 8 c6 ♔e7! 9 ♔c4 ♔d8 and Black escapes with a draw) 7...♔xe5 8 ♔b5 ♔d6 9 c5+ ♔d5 10 c6 ♔d6 11 ♔b6 and the c-pawn promotes.

7 g4

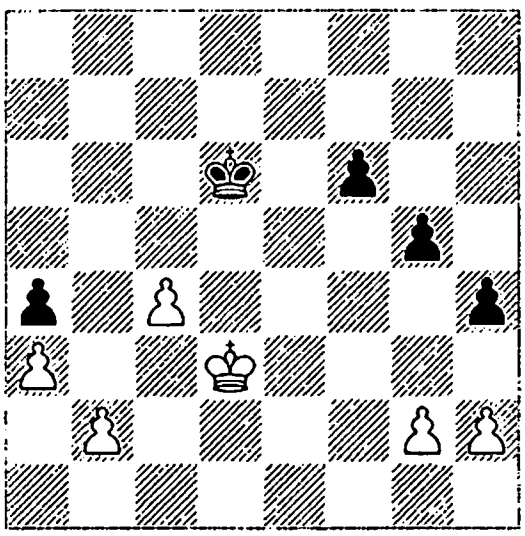
White's kingside pawns start their advance.

7...a4 8 g5 a3 9 ♔c3 ♔c5 10 h4 a2 11 ♔b2 1-0

After 11...♔xc4 12 e6! fxe6 13 h5 White again wins by one tempo.

In rare cases, the outside passed pawn may even provide winning chances despite a material disadvantage.

W



Diermair – E. Moser
Austrian Ch, Köflach 2006

White is a pawn up, but the value of this extra pawn is severely limited by the situation on the queenside, where two white pawns are held back by Black's lone a-pawn. Despite White's extra pawn, he must take care as there is a danger that Black will use her kingside majority to create an outside passed pawn there, deflect the white king and then take the three queenside pawns with her king.

1 ♔d4?

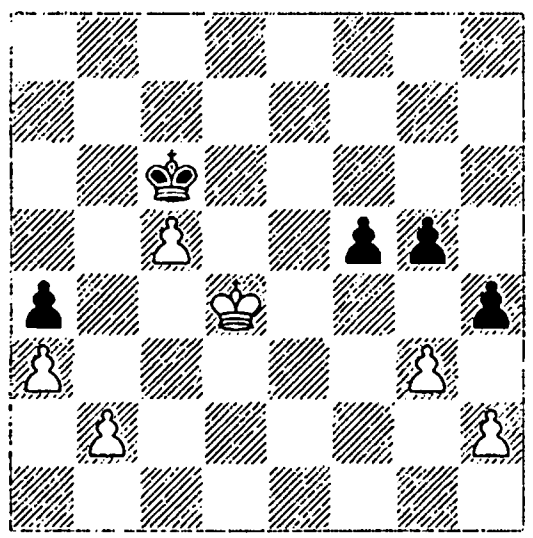
Perhaps White did not realize the danger since this natural move surprisingly gives Black a winning position. The simplest way to reach a draw was by 1 b4 axb3 2 ♔c3 since the liquidation of Black's queenside pawn nullifies the outside passed pawn strategy outlined above; after 2...f5 3 ♔xb3 f4 4 ♔c3 g4 5 ♔d3 f3 6 ♔e3! (6 gxf3? g3 7 hxg3 h3 wins for Black as the h-pawn cannot be stopped) 6...fxg2 7 ♔f2 h3 8 a4! ♔c5 9 a5 both kings are tied down and it is a dead draw.

1...f5!

Black's pawn has crossed a critical threshold and there is no longer any time for White to liquidate Black's a-pawn.

2 c5+ ♔c6 3 g3 *(D)*

B



Here a draw was agreed (½-½) even though Black now has a winning position. The simplest method is **3...f4!** (3...hxg3? 4 hxg3 f4 5 gxf4 gxf4 6 ♔e4 ♔xc5 7 ♔xf4 is only a draw) **4 gxf4** (or 4 g4 h3! 5 ♔c4 f3 6 ♔d3 ♔xc5 7 ♔e3 ♔c4 8 ♔xf3 ♔b3 9 ♔e4 ♔xb2 10 ♔f5 ♔xa3 11 ♔xg5 ♔b3 and Black promotes first) **4...gxf4 5 ♔e4 ♔xc5 6 ♔xf4 ♔c4 7 h3** (after 7 ♔g4 ♔b3 8 ♔xh4 ♔xb2 9 ♔g5 ♔xa3 10 h4 ♔b3 11 h5 a3 Black's promotion will cover h8) **7...♔b3 8 ♔e3 ♔xb2 9 ♔d3 ♔xa3 10 ♔c3 ♔a2 11 ♔c2 a3 12 ♔c1 ♔b3 13 ♔b1 ♔c3** and Black wins.

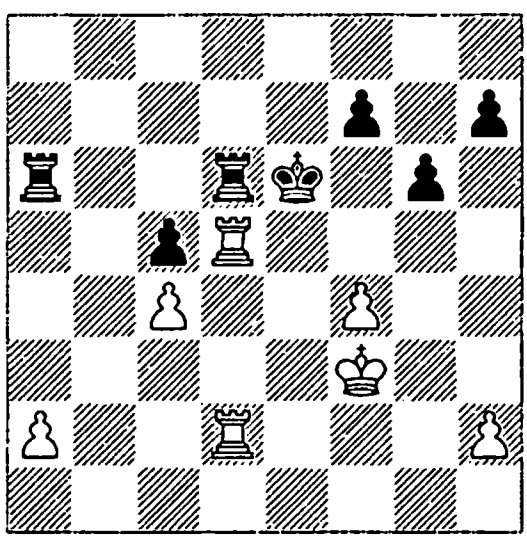
Summary:

- In some situations an outside passed pawn can counterbalance an extra pawn.
- Timing is important and the main question is whether the defender's king is able to eliminate enough enemy pawns to hold the game.
- If the side with the extra pawn has crippled pawns, the outside passed pawn may even confer an advantage.

2.8 Space Advantage

Having a space advantage is often a considerable advantage in a king and pawn ending. The reason is that such endings often develop into a race with White's king heading for one side of the board while Black's king heads for the other. Then the result depends on who is first to gobble up the enemy pawns and promote a pawn. If your pawns are initially further forward than your opponent's, you are more likely to promote first in a race situation.

W



Alterman – Bosboom
Wijk aan Zee 1998

It seems likely that all the rooks will be exchanged on d6, and in the resulting ending White will have an outside passed a-pawn. However, this does not guarantee victory, firstly because White's king may not be able to penetrate into Black's position and secondly because Black also has the possibility of making a passed pawn on the kingside.

1 f5+!?

This tricky move prevents Black from blocking the position by playing ...f5 himself. Therefore Black is now obliged to calculate whether to take the pawn or just retreat his king.

1 ♖xd6+ ♖xd6 2 ♖xd6+ ♔xd6 is also a draw, because Black threatens ...f5, preventing the white king from penetrating, and if White plays 3 f5 then 3...gxf5 transposes to the next note.

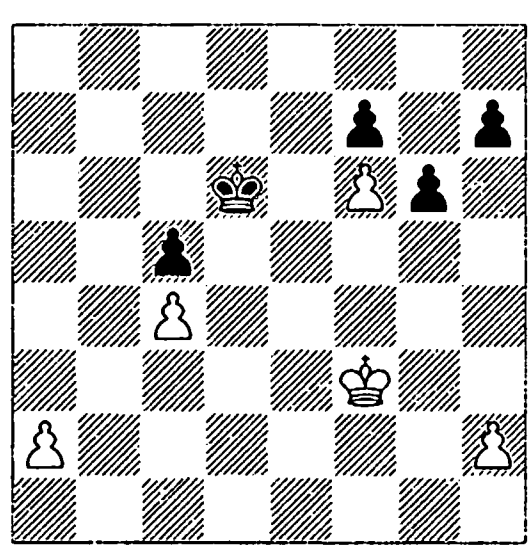
1...♔e7?

This rather surprisingly loses, as it allows White to establish a large space advantage on the kingside. 1...gxf5! is correct and draws after 2 ♖xd6+ ♖xd6 3 ♖xd6+ ♔xd6 4 ♔f4 ♔c6! (not 4...♔e6? 5 a4 h6 6 a5 ♔d7 7 ♔xf5 ♔c7 8 ♔f6 ♔b7 9 ♔xf7 ♔a6 10 ♔e6 ♔xa5 11 ♔d6 ♔b6 12 ♔d5 h5 13 h4 and White wins) 5 ♔xf5 ♔b6 6 ♔e5!? (after 6 ♔f6 ♔a5 7 a3 ♔a4 8 ♔xf7 ♔xa3 it is time to draw by 9 ♔g7 since 9 ♔e6? even loses after 9...♔b3! 10 ♔d5 ♔b4) 6...♔a5 7 ♔d5 ♔b4 8 a3+ ♔xa3 9 ♔xc5 f5 10 ♔d4 (10 ♔d5 f4 11 ♔e4 ♔b4 12 ♔xf4 ♔xc4 13 ♔g5 ♔d5 and Black reaches f7 in time) 10...♔b4 11 c5 ♔b5 12 ♔d5 f4 13 c6 f3 14 c7 f2 15 c8♕ f1♕ and White cannot do better than reach an ending of ♕+h♙ vs ♕ which is a comfortable draw since the pawn is only on the second rank.

2 ♖xd6 ♖xd6 3 ♖xd6 ♔xd6 4 f6! *(D)*

The key move, ensuring that White's king can proceed directly to e4 and d5 to attack the c5-pawn. Black can make his own passed pawn by pushing the g- and h-pawns, but this is simply too slow. 4 ♔e4? is wrong since 4...f6! 5 h4 ♔c6 6 a4 ♔b6 7 fxg6 hxg6 8 ♔d5 f5 9 a5+ ♔xa5 10 ♔xc5 ♔a6 11 ♔d5 ♔b7 is only a draw.

B



4...h6

Other moves also lose: 4...h5 5 h4 cripples Black's kingside pawns, 4...g5 5 ♔g4 h6 6 ♔h5 is a quick win for White, and after 4...♔e5 5 a4 h6 6 a5 ♔d6 7 a6 ♔c6 8 a7 ♔b7 9 ♔e4 g5 10 ♔d5 h5 11 ♔xc5 g4 12 ♔d6 h4 13 c5 g3 14 c6+ ♔xa7 15 hxg3 hxg3 16 c7 g2 17 c8♕ g1♕ 18 ♕c5+ White exchanges queens and wins.

5 a4 ♔c6 6 a5 ♔b7 7 ♔e4 g5

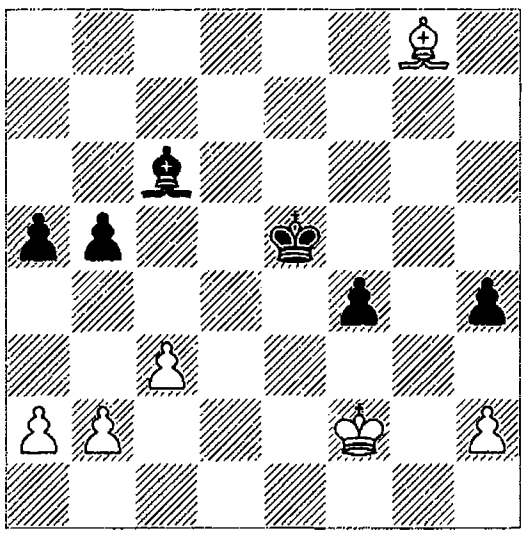
Or 7...♔c6 8 ♔e5 g5 9 ♔f5 ♔b7 10 ♔g4 and White will take on h6 and then f7. This is a typical line showing how a space advantage is often decisive in king and pawn endings; as soon as the position turns into a race, the side with pawns nearer the queening square will have an automatic advantage.

8 ♔d5 g4 9 ♔xc5 h5 10 ♔d6 h4 11 c5 g3 12 c6+ 1-0

12...♔a7 (or 12...♔c8 13 a6) 13 hxg3 hxg3 14 c7 g2 15 c8♕ g1♕ 16 ♕c5+ and White wins easily.

The following example is a little more complicated, but makes the point very clearly.

B



Ruijgrok – Nijboer
Wijk aan Zee 2008

Black can force the exchange of bishops by playing ...♗d5, but is this a good idea? Black already has a passed pawn, but White can create his own passed pawn by advancing his queenside majority. If White does play b3 and c4, and Black exchanges pawns on c4, then the pawn position will be more or less symmetrical, which makes it hard to judge who will have the advantage. It is easy to get confused by thinking about how 'outside' the two players' passed pawns are, but that isn't really a relevant factor here. Black can abandon his f-pawn and charge towards the queenside with his king, but after White has taken the f-pawn he can go on to digest the h4-pawn, creating his own passed pawn on the kingside. Thus the usual outside passed pawn plan of using the pawn to deflect the enemy king away from the mass of pawns doesn't operate here, as there are still possibilities to make additional passed pawns on both side of the board. The most important factor here, and the one which tips the balance in Black's favour, is his space advantage. White's pawns lie on the first two ranks, while Black's are already well advanced. This gives Black an automatic edge in a race situation, because when Black uses his king to create a passed pawn on the queenside, it will already be some way up the board, while White's h-pawn is still on the starting line. In the game Black showed excellent judgement in forcing the bishops off, since the pawn ending is indeed winning for him.

1...♗d5! 2 ♗xd5

Otherwise White loses the a-pawn for nothing.

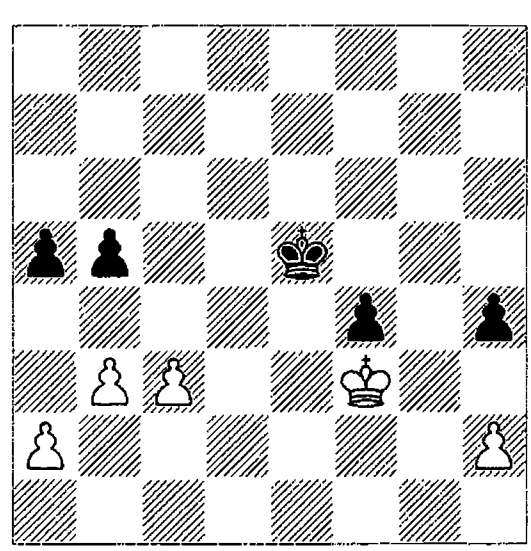
2...♔xd5 3 ♔f3

Or else Black occupies the active square e4 with his king.

3...♔e5 4 b3 *(D)*

4 h3 a4 transposes, as White has nothing better than 5 b3.

B



4...a4!

The only move to win. After 4...♔f5? 5 c4 bxc4 6 bxc4 ♔e5 7 c5 ♔d5 8 ♔xf4 ♔xc5 9 ♔g4 ♔b4 10 ♔xh4 ♔a3 11 ♔g5 ♔xa2 12 h4 a4 13 h5 a3 14 h6 ♔b1 or 4...h3? 5 c4 bxc4 6 bxc4 ♔d4 7 ♔xf4 ♔xc4 8 ♔g3 ♔b4 9 ♔xh3 ♔a3 10 ♔g4 ♔xa2 both sides promote at the same time. The move played is best because the a-pawn

edges forward a square, which gives Black an extra tempo when ultimately the a-pawn becomes passed.

5 h3

Now 5 c4 (5 bxa4 bxa4 6 c4 ♔d4 transposes) 5...bxc4 6 bxc4 (or 6 bxa4 c3 7 ♔e2 ♔e4 and Black wins) 6...♔d4 7 ♔xf4 ♔xc4 8 ♔g4 ♔b4 9 ♔xh4 ♔a3 is winning for Black because his a-pawn is already on a4.

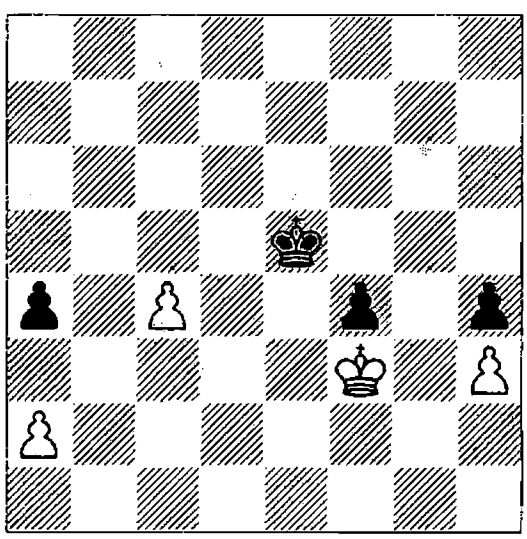
5...♔f5!

Putting White in zugzwang. At first sight moving the king away from the c-pawn gives back the tempo Black gained by advancing his a-pawn, but this isn't so because White can't take the f-pawn when Black's king is on f5, and so he can't make use of the tempo. 5...a3? is wrong as after 6 c4 bxc4 7 bxc4 ♔d4 8 ♔xf4 ♔xc4 9 ♔e4 ♔c3 10 ♔e3 ♔b2 11 ♔d2 ♔xa2 12 ♔c2 Black's king is imprisoned and White draws.

6 bxa4

Now White is more or less forced to commit his queenside pawns, since 6 b4 loses after 6...♔e5 7 a3 ♔f5 8 ♔f2 ♔e4 9 ♔e2 f3+ 10 ♔f2 ♔d3 11 ♔xf3 ♔xc3 12 ♔g4 ♔b3 13 ♔xh4 ♔xa3 14 ♔g5 ♔xb4 15 h4 a3 and Black promotes first.

6...bxa4 7 c4 ♔e5 *(D)*



The key moment; if White could now take on f4 then he would gain a tempo and draw, but he cannot and so has to play either c5 or ♔g4, but both these moves return the tempo that Black gave up when he played his king to f5.

8 ♔g4

After 8 c5 ♔d5 9 ♔g4 (or 9 ♔xf4 ♔xc5 10 ♔g4 ♔b4 and the route to a2 is no longer from c5 than it was from c4, and so Black again promotes first) 9...♔xc5 10 ♔xh4 ♔d4 11 ♔g4 ♔e3 the f-pawn decides.

8...♔d4!

A kind of mini-Réti manoeuvre. Black moves closer to the c-pawn, while at the same being ready to play ...♔e3 to support the f-pawn if necessary. 8...♔e4? 9 c5 only leads to a drawn queen ending.

9 ♔xf4

9 ♔xh4 f3 10 ♔g3 ♔e3 shows off the other half of the Réti manoeuvre.

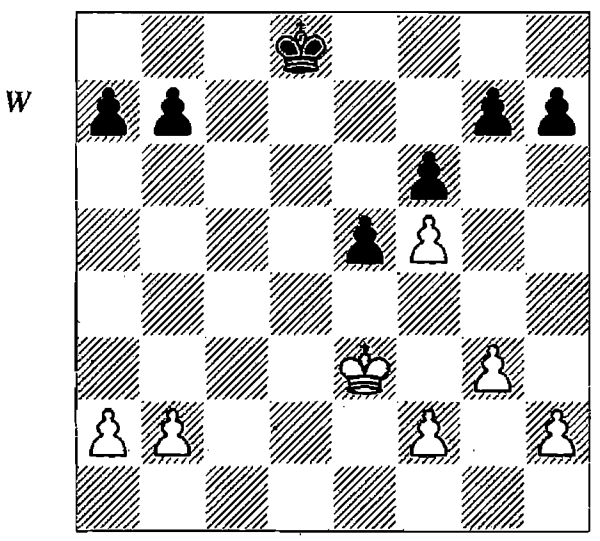
9...♔xc4 10 ♔e3

After 10 ♔g4 Black promotes first, so White sends his king to the queenside, but it is a hopeless journey.

10...♔c3 11 ♔e2 ♔b2 12 ♔d2 ♔xa2 13 ♔c3 ♔a3 14 ♔c2 ♔b4 15 ♔b2 ♔c4 16 ♔a3 ♔d4 17 ♔xa4 ♔e4 18 ♔b3 ♔f4 0-1

Black wins by one tempo.

A space advantage often goes hand-in-hand with an active king position, as in the following example.



Atalik – Korchnoi
European Team Ch, Plovdiv 2003

Here White's advantage consists of two factors. The first is that it is his turn to move and therefore he can occupy the active central d5-square, giving him a favourable king position. The second is the advanced f5-pawn, because if the white king gets the chance to run to g7 and

start taking enemy pawns, the f5-pawn means that White will be able to make a queen relatively quickly. White's advantage is easily sufficient to win, and it is remarkable how a strong grandmaster misses win after win until finally he allows Black to reach a drawn position.

1 ♔e4 ♔e7 2 ♔d5 ♔d7

White's basic plan is to advance his queenside pawns to a5 and b5, and then play a6. This will force Black to give up his pawn control of the c6-square, and then his king will be locked to d7 to prevent the white king from penetrating via c6 or e6. On the kingside, Black cannot afford to play ...g6, as an exchange of pawns on g6 would give White the chance to create a decisive outside passed h-pawn. Thus Black has just one reserve tempo on the kingside, with his h-pawn. White has more reserve tempi, since he has f3 and at least two moves with his h-pawn. Thus if White is able to put his plan into effect, Black will eventually fall into zugzwang. It follows that at some stage Black must counter White's queenside advance by playing ...a6, so as to maintain a pawn on b7 controlling c6.

3 b4

White is already threatening to play b5, ruling out the possibility of ...a6.

3...♔e7

Black decides not to counter the threat of b5, thus giving White a direct route to victory. However, he couldn't have saved the game by playing 3...a6 since White wins in any case by 4 a4 ♔e7 5 b5 axb5 6 axb5 ♔d7 7 g4 h6 8 f3 ♔c7 9 ♔c5 ♔d7 (9...b6+ 10 ♔d5 ♔d7 11 h3 and White wins) 10 ♔b6 ♔c8 11 ♔a7 ♔c7 12 b6+ ♔c6 13 h3 and White's reserve tempi on the kingside are decisive.

4 a4

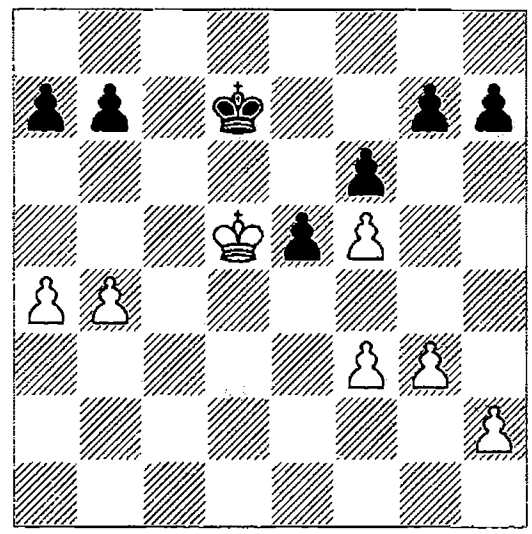
This retains the win, but it would have been simpler to cut out the ...a6 defence entirely by 4 b5!. Then White wins comfortably by just pushing his pawn to a6: 4...♔d7 5 a4 ♔e7 6 a5 ♔d7 7 a6 bxa6 8 bxa6 ♔c7 9 ♔e6 ♔b6 10 ♔f7 ♔xa6 11 ♔xg7 ♔b5 12 ♔xf6 a5 13 ♔g7 a4 14 f6 a3 15 f7 a2 16 f8♕ a1♕ 17 ♔xh7 with an easy win in the queen ending.

4...♔d7

4...e4 doesn't help at all due to 5 b5 ♔d7 6 a5 ♔e7 7 a6, etc., as before.

5 f3 *(D)*

B



Again White refuses to play b5, which would still have been an easy win.

5...a6

Black now decides to prevent the b5 and a5-a6 plan. This doesn't save the game, but it makes White work harder. 5...♔e7 loses after 6 b5 ♔d7 7 a5 ♔e7 8 a6 bxa6 9 bxa6 ♔d7 10 g4 g5 11 fxg6 hxg6 12 h4 ♔e7 and now both 13 g5 and 13 h5 are easy wins.

6 g4 ♔e7 7 ♔c5 ♔d7 8 ♔b6 ♔c8 9 ♔a7

The simplest route to victory was 9 b5! axb5 10 axb5 ♔b8 11 h3! ♔c8 12 ♔a7 ♔c7 (or 12...g5 13 b6 h6 14 ♔a8) 13 b6+ ♔c6 14 h4 g6 (14...h6 15 h5) 15 fxg6 hxg6 16 h5 and White promotes first.

9...♔c7 10 b5?!

This is a more serious error, as now White cannot win without entering a queen ending. The last chance to win cleanly lay in 10 h4! (by pushing the h-pawn, White rules out ...g6 or ...g5 by Black, as then fxg6 followed by h5 leads to White promoting first) 10...♔c6 11 g5 h6 (11...♔c7 12 b5 wins for White) 12 gxh6 gxh6 13 h5 ♔c7 14 b5 axb5 15 axb5 ♔c8 16 b6 and Black can resign.

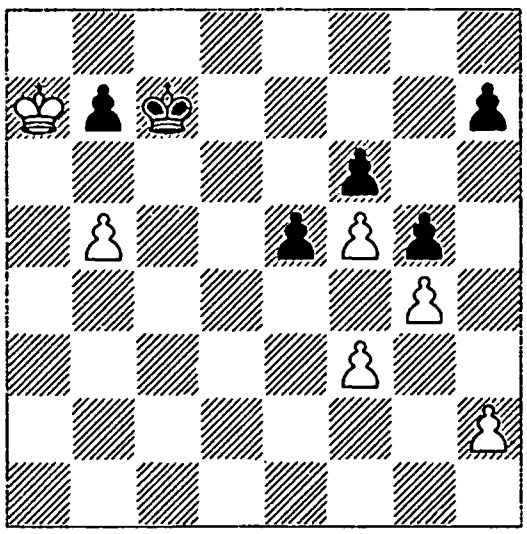
10...axb5 11 axb5 g5! *(D)*

Black seizes his only chance.

12 fxg6!

This is the correct move. Other moves offer few winning chances:

1) 12 ♔a8 ♔b6 13 ♔b8 ♔xb5 14 ♔xb7 ♔c5 15 ♔c7 ♔d4 16 ♔d6 ♔e3 17 ♔e6 ♔xf3 18 ♔xf6 e4 19 ♔xg5 e3 20 f6 e2 21 f7 e1♕ 22



f8♕+ ♔g2 23 h4 ♕e3+ 24 ♔h5 ♔h3 and Black should have few problems drawing because his king is well placed to attack the white pawns.

2) 12 h3 h6 13 ♔a8 ♔b6 14 ♔b8 ♔xb5 15 ♔xb7 ♔c5 16 ♔c7 ♔d4 17 ♔d6 ♔e3 18 ♔e6 ♔xf3 19 ♔xf6 e4 20 ♔g6 e3 21 f6 e2 22 f7 e1♕ 23 f8♕+ ♔g3 24 ♕xh6 and Black has several ways to draw; for example, 24...♕e6+ 25 ♔xg5 ♕e5+ 26 ♔g6 ♕e6+ 27 ♔h7 ♕e7+ 28 ♕g7 ♕h4+ and White can only escape the checks by 29 ♔g6, which allows a simple draw by 29...♔xh3 30 g5 ♕e4+.

12...hxg6 13 h4 f5 14 gxf5 gxf5 15 h5 e4 16 fxe4 fxe4 17 h6

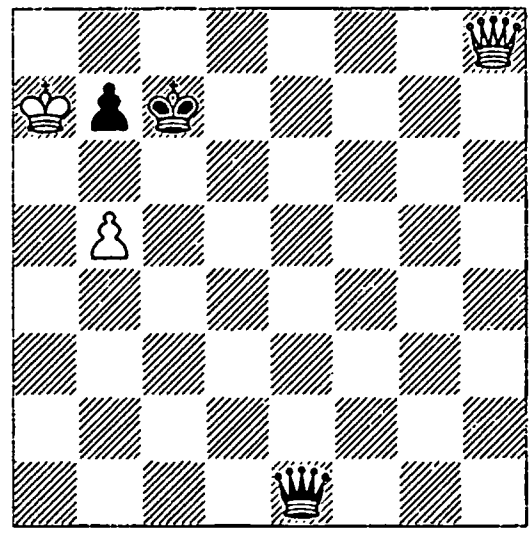
17 b6+? is wrong, as after 17...♔c6 18 h6 e3 19 h7 e2 20 h8♕ e1♕ 21 ♕c8+ ♔b5! 22 ♕d7+ ♔c5 23 ♕xb7 ♕e3 the position is a draw; normally White wins when Black's king is far from the drawing zone in the h1-corner, but here his king is so close to the white pawn that he can hold the game by directly attacking it; for example, 24 ♕c7+ ♔b5 25 ♕d7+ ♔a5 26 ♕d5+ ♔b4 27 ♕c6 ♔a5.

17...e3 18 h7 e2 19 h8♕ e1♕ *(D)*

This position is winning for White, but it is not simple.

20 ♕h7+?

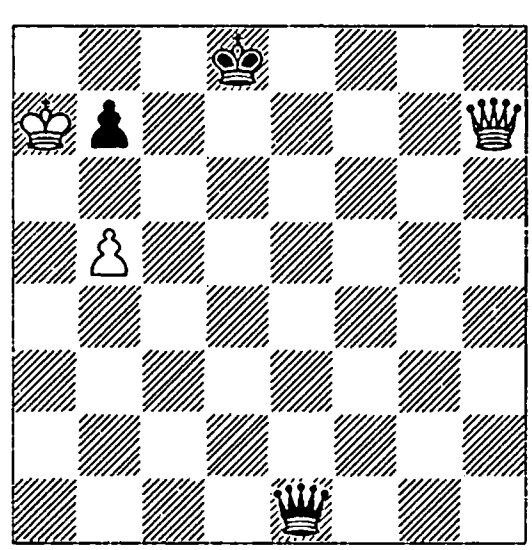
Now it's a draw. 20 ♕b8+! ♔d7 21 ♕xb7+ ♔d6 22 ♕c6+ ♔e7 23 b6 is the simplest method since Black's king has been driven away, and so cannot harass the white pawn as in the previous note, and it is also far away from the favourable h1-corner. One line runs 23...♕a1+ 24 ♔b8 ♕h8+ 25 ♕c8 ♕d4 26 ♕c7+ ♔e8 27 b7 ♕d5 28 ♕b6! ♕c4 29 ♕a5 ♔d7 30 ♔a8 ♕e4 31



♕b5+ ♔e7 (31...♔c7 32 ♕e5+! is a typical idea) 32 ♕c5+ ♔d7 33 ♕a5! (now Black is in zugzwang) 33...♔e8 34 ♕a3 ♕d5 35 ♔a7 ♕d4+ 36 ♔a6 ♕f6+ 37 ♔b5 ♕f1+ 38 ♔c6 ♕h1+ (on most other checks, White can improve his position by interposing his queen) 39 ♔b6 ♕b1+ 40 ♔a7 ♕g1+ 41 ♔a8 (White has returned to a8, but now the black queen has been driven away from the centre of the board) 41...♕g2 42 ♕e3+ ♔d7 43 ♕d4+ ♔c7 44 ♕c5+ ♔d8 45 ♕d6+ ♔e8 46 ♔a7 ♕f2+ 47 ♔a6 ♕a2+ 48 ♔b5 ♕e2+ 49 ♔b6 ♕b2+ 50 ♔c6 ♕c3+ 51 ♕c5 ♕f6+ 52 ♔b5 ♕b2+ 53 ♔a6 ♕f6+ 54 ♔a7 ♕a1+ 55 ♔b6 and the checks come to an end.

20...♔d8? *(D)*

20...♔d6! 21 ♕xb7 ♔c5! is the only way to save the game, after which Black can reach a draw similar to that in the note to White's 17th move; for example, 22 b6 ♕e3 or 22 ♕c6+ ♔b4 23 b6 ♕e3.



21 ♕xb7

21 b6! is simpler; for example, 21...♕a5+ 22 ♔xb7 ♕d5+ 23 ♔b8 ♕d4 24 ♕c7+ ♔e8 25 b7 ♕d5 26 ♕b6 transposes into the note to White's 20th move.

After the move played, the game was surprisingly agreed drawn (½-½), even though White is winning. The main line runs 21...♕a1+ 22 ♕a6 ♕g7+ 23 ♔a8 ♕g2+ 24 ♕b7 ♕a2+ 25 ♔b8 ♕h2+ 26 ♔a7 ♕a2+ 27 ♕a6 ♕f7+ 28 ♔b8 ♕f4+ 29 ♔a8 ♕f3+ 30 ♕b7 ♕a3+ 31 ♔b8 ♕d6+ 32 ♔a7 ♕a3+ 33 ♕a6 ♕e7+ 34 ♔a8 ♕e4+ 35 ♕b7 ♕a4+ 36 ♔b8 ♕f4+ 37 ♔a7 ♕a4+ 38 ♕a6 (by a long series of manoeuvres White has finally forced Black to check on a4, from where there is no direct access to the second rank because the b5-pawn is in the way; thus White manages to advance his pawn to b6) 38...♕c4 39 b6 ♕c5 40 ♕b7 ♕a5+ 41 ♔b8 ♕b5 42 ♕c7+ ♔e8 43 b7 ♕d5 44 ♕b6 and we have again transposed into the note to White's 20th move.

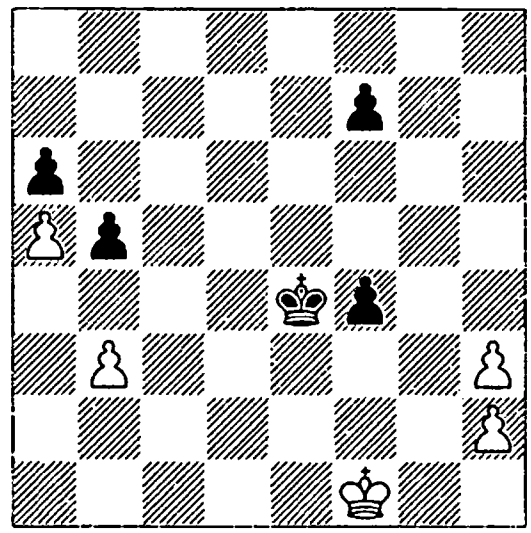
Summary:

- Controlling more space is often an advantage in pawn endings because the more advanced a pawn is, the quicker it is to promote if it becomes a passed pawn. This can happen when both sides' kings penetrate amongst the opposing pawns.
- Caution is necessary, however, as pawns must not be advanced recklessly. In some circumstances this only weakens them, especially if they are vulnerable to attack by the enemy king.
- A space advantage coupled with an advanced king position is often a decisive advantage.

2.9 Active King vs Outside Passed Pawn

It often happens that the players have competing advantages and a common combination is the struggle of an active king against an outside passed pawn. Situations like this are quite interesting because it sometimes isn't even clear who has the advantage, and small differences can have a big impact on the result. In the first example, while there is little doubt who stands better, the position was complicated enough to baffle the players and annotator Cvetković.

B



B. Maksimović – Čabrilo
Yugoslavia 1974

In this position White has the outside passed pawn(s), but Black's more active king position means that only he has winning chances.

1...♔f3?

In *Informator 18*, Cvetković gives this move an exclamation mark, but it throws away the win. The correct plan is simply to play the king to g5: 1...♔f5! (it's also good to start with 1...b4!) 2 ♔f2 (after 2 b4 ♔g5 3 ♔f2 ♔h4 4 ♔g2 f3+ 5 ♔xf3 ♔xh3 Black wins as it's a long way to take the f7-pawn) 2...♔g5 3 ♔f3 b4! (an important move, gaining a tempo when the kings rush to the queenside; the immediate 3...♔h4? leads to a draw after 4 ♔xf4 ♔xh3 5 ♔f5 ♔xh2 6 ♔f6 ♔g3 7 ♔xf7 ♔f4 8 ♔e6 ♔e4 9 ♔d6 ♔d4 10 ♔c6 ♔c3 11 ♔b6 ♔xb3 12 ♔xa6 b4 13 ♔b7) 4 ♔e4 ♔h4 5 ♔xf4 ♔xh3 6 ♔f5 ♔xh2 7 ♔f6 ♔g3 8 ♔xf7 ♔f4 9 ♔e6 ♔e4 10 ♔d6 ♔d4 11 ♔c6 ♔c3 12 ♔b6 ♔xb3 13 ♔xa6 (now we see the importance of the preliminary ...b4: Black has gained a crucial tempo) 13...♔c4 14 ♔b7 b3 15 a6 b2 16 a7 b1♕+ (Black's king is close enough to win this position) 17 ♔c7 ♕e4 18 ♔b8 ♕e8+ 19 ♔b7 ♔b5 20 a8♕ ♕d7+ 21 ♔b8 ♔b6 with a quick mate.

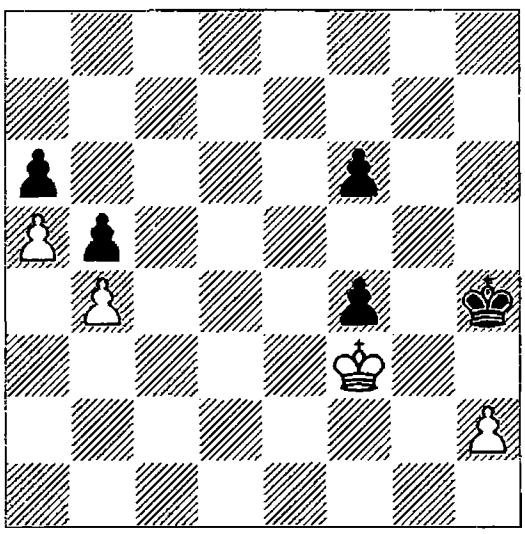
2 b4!

This is actually a position of reciprocal zugzwang. It is Black to play and he has nothing better than to push his rear f-pawn; however,

this means that White's king can take it one move more quickly.

2...f6 3 h4 ♔g4 4 ♔f2 ♔xh4 5 ♔f3 *(D)*

B



5...♔h3

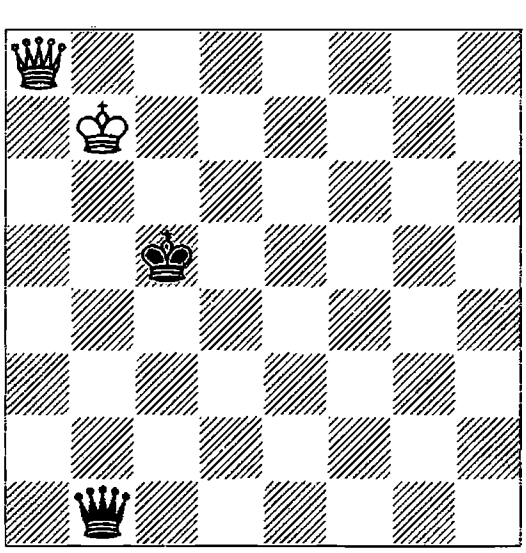
5...♔g5 is also a draw after 6 h3! ♔f5 7 h4 ♔e5 8 ♔e2! ♔e4 9 ♔f2 ♔f5 (not 9...f3? 10 h5 ♔f5 11 ♔xf3 ♔g5 12 ♔e4 f5+ 13 ♔e5 f4 14 h6 f3 15 h7 f2 16 h8♕ f1♕ 17 ♕g7+ ♔h5 18 ♔d6 and White has a very favourable queen ending) 10 ♔f3 and neither side can make progress.

6 ♔xf4 ♔xh2 7 ♔f5 ♔g3 8 ♔xf6 ♔f4 9 ♔e6 ♔e4 10 ♔d6 ♔d4 11 ♔c6 ♔c4 12 ♔b6 ♔xb4 13 ♔xa6 ♔c5

Relatively the best chance, but it should not be enough to win.

14 ♔b7 b4 15 a6 b3 16 a7 b2 17 a8♕ b1♕+ *(D)*

W



18 ♔c7??

A losing blunder, which is made quite often in practice. After 18 ♔c8! ♕f5+ 19 ♔b8! ♕e5+ 20 ♔a7! Black is unable to win. The key point is that White must never play his king to b7.

18...♕h7+ 19 ♔c8

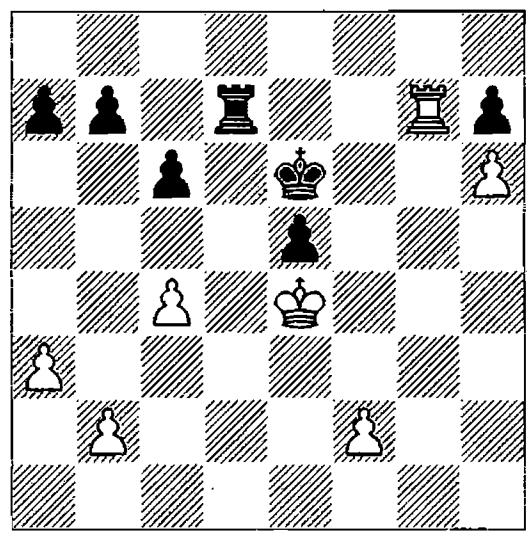
White loses at once in the case of 19 ♔b8 ♔b6.

19...♕g8+ 20 ♔b7 ♕f7+ 21 ♔a6 ♕e6+ 0-1

After 22 ♔b7 ♕d7+ 23 ♔b8 (23 ♔a6 ♕b5+ 24 ♔a7 ♕b6#) 23...♔b6, mate is inevitable.

The next example is similar in basic concept, but the details are rather more complex.

B



Veröci – Bohmgren

Skopje Olympiad (women) 1972

Black faces a critical decision: should she exchange rooks or not?

1...♖xg7?!

1...♖d4+! 2 ♔e3 ♖d7 is correct and would have sufficed for a relatively comfortable draw. After the move played, the draw is far more troublesome.

2 hxg7 ♔f7 3 ♔xe5 ♔xg7

In this position it isn't immediately obvious who stands better. Black has an outside passed pawn, but White's king is more actively placed. A purely static assessment would tend to favour Black, but actually White is the only one with winning chances.

4 ♔e6!

White must make the most of her king position. Not 4 f4?! ♔f7, when Black has an easy draw.

4...♔g6?

This is the move which throws away the draw, which Black could have reached by accurate play:

1) 4...c5? and now:

1a) 5 f4? (wrong, as now Black can seal up the queenside) 5...a5! 6 a4 (6 f5? ♔f8 even wins for Black) 6...h5! (6...b6? 7 f5 ♔f8 8 ♔f6 is a decisive zugzwang) 7 ♔f5 ♔h6 8 ♔e6 ♔g7 and White has nothing better than a repetition.

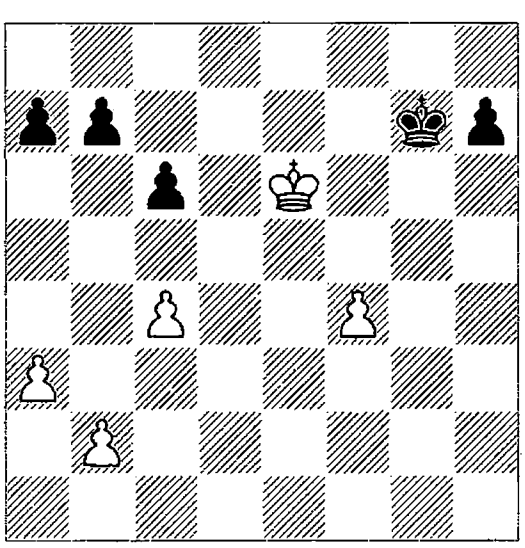
1b) 5 b4! cxb4 6 axb4 a6 7 c5 and Black is in a fatal zugzwang; for example, 7...h5 8 ♔f5 ♔h6 9 f4 and White wins the h-pawn.

2) 4...a5! (4...b6! 5 b4 a5 is an equally good move-order) 5 b4 b6! (5...axb4? 6 axb4 ♔g6 7 f4 ♔g7 8 f5 ♔f8 9 ♔f6 b6 transposes to line 3 in the note to White's sixth move, which is winning for White) 6 bxa5 bxa5 7 c5 a4 8 ♔d6 h5 9 ♔xc6 h4 10 ♔b6 h3 11 c6 h2 12 c7 h1♕ 13 c8♕ ♕b1+ 14 ♔a7 ♕b3 is the best defence. Although White is a pawn up, her winning chances are minimal and at best she will reach a drawn position of ♕+a♙ vs ♕.

5 f4 ♔g7 *(D)*

The only move, as otherwise White promotes her pawn.

W



6 a4!?

This is probably the most practical move, as it leads to a queen ending which should be a win, and moreover a win which can be handled by humans. White has an alternative which the computer will tell you is a 'forced' win, but requires White to win a tricky ♕+♙ vs ♕+♙ position. 6 f5 ♔f8 7 ♔f6 is the machine's preference, when Black cannot avoid one of two possible fates: she either runs out of pawn tempi on the queenside, and winds up in a fatal zugzwang, or she has to weaken the c6-pawn, which allows White to attack this pawn with her king. The options then are:

1) 7...b6 8 b4 b5 9 c5 a6 10 ♔e5! ♔e7 (after 10...h5 11 ♔f4 White picks up the h-pawn and wins) 11 f6+ ♔f7 12 ♔d6 h5 13 ♔xc6 h4 14 ♔b6 h3 15 c6 h2 16 c7 h1♕ 17 c8♕ is an easily winning queen ending.

2) 7...b5 8 c5 a5 9 b3 and Black runs out of pawn tempi.

3) 7...a5! (the best chance) 8 b4 axb4 9 axb4 b6 10 c5 b5 (10...bxc5 11 bxc5 is again zugzwang) 11 ♔e5 ♔e7 12 f6+ ♔d7 13 f7 ♔e7 14 f8♕+ ♔xf8 15 ♔d6 h5 16 ♔xc6 h4 17 ♔b6 (17 ♔xb5?? loses to 17...♔e7) 17...h3 18 c6 h2 19 c7 h1♕ 20 c8♕+ ♔e7 21 ♕c5+ ♔f7 22 ♕xb5 with mate in a further 48 moves (assuming optimal play by both sides). It is not surprising that this position is a win, as Black's king is far from the drawing h1-corner, but of course it isn't easy to play such positions in practice.

Another winning line is 6 c5 h5 7 ♔f5 ♔h6 8 b4 b5 9 cxb6 axb6 10 ♔e6 h4 11 f5 h3 12 f6 h2 13 f7 ♔g7 14 ♔e7 h1♕ 15 f8♕+ ♔h7 16 ♕f5+ ♔g7 17 ♕e5+ ♔h7 18 ♕c7 and Black is doomed by her weak queenside pawns and distant king. Here the most likely result will be a winning ending with ♕+b♙ vs ♕, which is again hard for humans to handle. This reinforces the point that the move played is the best practical choice.

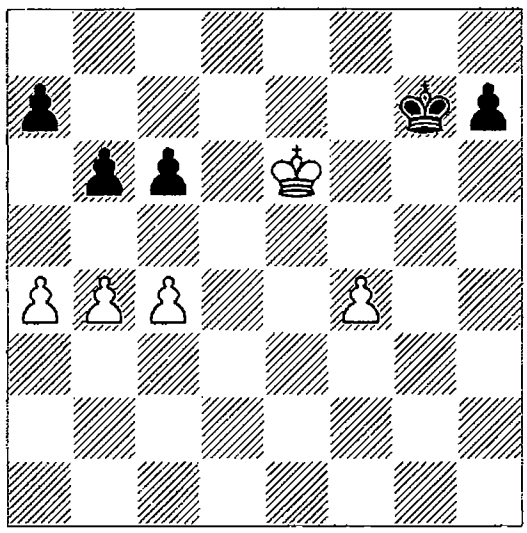
6...b6?!

After this White can win without a queen ending. 6...h5 also allows a simple win after 7 ♔f5 ♔h6 8 b4! b6 (8...c5 9 bxc5 a5 10 c6 bxc6 11 c5 is a win for White) 9 a5 b5 10 cxb5 cxb5 11 a6 with zugzwang.

6...c5 puts up the most resistance. After 7 a5 h5 8 a6 bxa6 (8...b6 9 ♔f5 ♔h6 10 b3 and White wins) 9 f5 h4 (or 9...♔f8 10 b4 cxb4 11 c5 b3 12 c6 b2 13 c7 b1♕ 14 c8♕+ ♔g7 15 f6+ ♔h6 16 ♕h8+ ♔g5 17 ♕g8+ ♔f4 18 f7 ♕b6+ 19 ♔e7 and White's king hides on h8) 10 ♔e7 h3 11 f6+ ♔h7 12 f7 h2 13 f8♕ h1♕ 14 ♕f5+ ♔h6 15 ♕xc5 ♕b7+ 16 ♔d8 ♕xb2 17 ♕d6+ ♔g5 18 c5 a queen ending is reached in which White's

advanced c-pawn provides a decisive advantage. Moreover, this ending involves little more than giving a few checks and pushing the pawn, so is easier to conduct than the ♕+♙ vs ♕ ending mentioned in the note to White's sixth move.

7 b4 *(D)*



7...c5

Yudovich gives the curious note (which I reproduce exactly) "7...a5! 8 bxa5 bxa5 9 f5 ♔f8 10 ♔f6 c5" without giving any assessment. Black is winning here, since the position at the end is a full-point reciprocal zugzwang with White to play, but it isn't hard to improve for White, since 8 c5! wins straight away.

8 bxc5 bxc5 9 a5!

The only move to win.

9...a6 10 f5 ♔f8 11 ♔f6 1-0

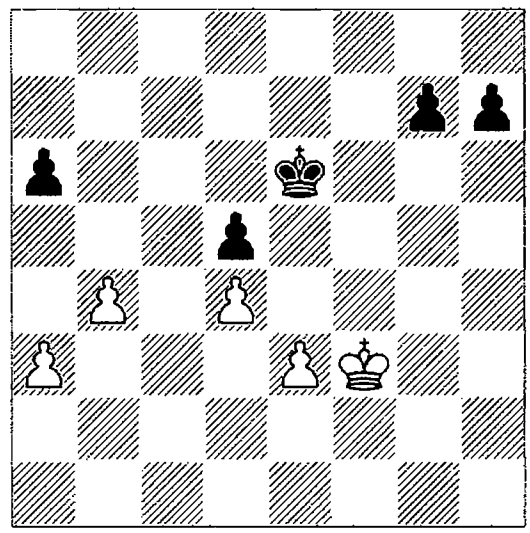
This is a full-point reciprocal zugzwang with Black to play.

Summary:

- In a struggle between an active king and an outside passed pawn, it is often the active king which proves the more important factor.
- When the players are in reciprocal zugzwang on one wing, the result will often be determined by pawn manoeuvres on the opposite flank.

2.10 Multiple Passed Pawns

Positions in which both sides have, or can create, multiple passed pawns can be very complicated and hard to evaluate, since everything depends on precise calculation.



Vorotnikov – Chekhov
USSR 1979

You may well find that if you enter the diagram position on your computer, the machine at first evaluates it as equal or even favourable for Black. This is especially the case if you are using tablebases, which in this position slows the computer down a lot without providing any compensating benefit. Indeed, a quick glance shows that at the moment White has no passed pawns, while Black already has two connected passed pawns on the kingside. Despite this, White has a winning position. The key point is that White can create passed pawns on the a- and d-files. By playing a4-a5 followed by b5 and a6, the a-pawn will already be on the sixth rank, which will make it impossible for Black's king to cope with both passed pawns. Thus Black has to rely on his own passed pawns, but these are easily blockaded by the white king.

1 a4

1 e4 also wins in a similar way.

1...h5

1...♔d7 2 a5 ♔c6 3 e4 dxe4+ 4 ♔xe4 h5 transposes to the game.

2 a5!

2 b5? a5 3 e4 dxe4+ 4 ♔xe4 g5 is a draw because White's passed pawns are closer together and can be blockaded by the black king.

2...♔d7

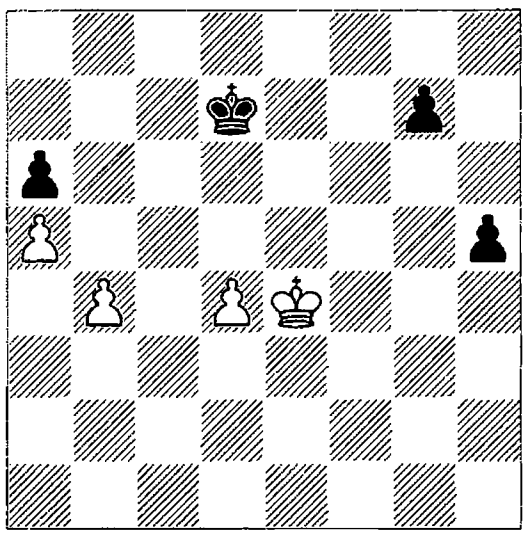
White wins after 2...g5 3 b5 ♔d7 4 bxa6 ♔c7 5 e4, so Black's king must approach the a-file.

3 e4!

White must take care to play his moves in the correct order, since 3 b5? axb5 4 e4 b4 5 a6 ♔c8 6 exd5 b3 7 a7 ♔b7 8 d6 b2 9 d7 b1♕ 10 a8♕+ ♔xa8 11 d8♕+ only leads to a draw.

3...dxe4+ 4 ♔xe4 *(D)*

B



4...♔c6

Or 4...h4 5 b5 axb5 6 a6 ♔c8 7 d5 h3 8 ♔f3 h2 9 ♔g2 b4 10 d6 b3 11 a7 ♔b7 12 d7 b2 13 a8♕+ ♔xa8 14 d8♕+ and White wins.

5 d5+ ♔b5

5...♔d6 6 b5 also wins for White.

6 ♔f4

Once Black's pawns are blockaded, he will be in zugzwang.

6...g5+

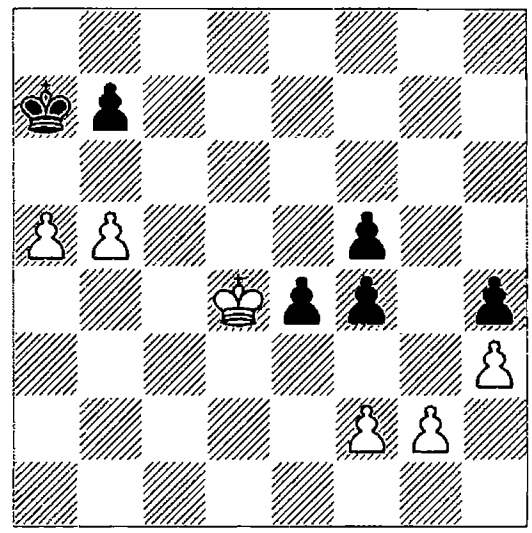
6...g6 7 ♔g5 is no better.

7 ♔xg5 1-0

The creation of two widely separated passed pawns is a common winning idea in king and pawn endings. Such a pair of pawns is stronger than, for example, three connected passed pawns, which can be blockaded by a king. However, connected pawns regain their strength if they can be supported by the king. Had Black realized this then she probably would have saved half a point in the following example (*see next diagram*).

King and pawn endings can be difficult to evaluate. Here the white king is restricted by the potential enemy passed pawn arising after ...e3. So if, for example, Black can play her king round to c5, forcing White to play a6, she would win a pawn. However, a moment's thought shows us that White is at least in no danger, since she can always arrange to meet ...♔d6 by ♔d4. Is it possible, then, that White might be better? The only chance to play for a win lies in creating a passed h-pawn by playing g3, but then Black has three connected passed pawns. Therefore if White wishes to adopt this plan, she should first place her king in front of the forthcoming enemy pawns. As so often in endgames, correct play depends both on forming the right plan and then calculating the consequences accurately. In this case it turns out that with best play the position is still drawn, but White should certainly play for a win as no risk is involved. Curiously, Minev's notes in *Informator 16* portray the diagram position as won for White, and make no mention of the fact that Black resigned in a drawn position.

W



Shikova – Krumova
Bulgaria 1972

1 ♔c3! ♔b8

The race is going to be close, so Black must not waste a tempo on the way to c5. 1...e3? is impossible as 2 ♔d3 wins at once.

2 ♔d2 ♔c7 3 ♔e2 ♔d6 4 ♔f1

It is too early to play 4 g3? since Black wins after 4...fxg3 5 fxg3 hxg3 6 h4 f4 7 h5 f3+ 8 ♔e3 g2 9 ♔f2 e3+ 10 ♔g1 e2 and the pawns roll home.

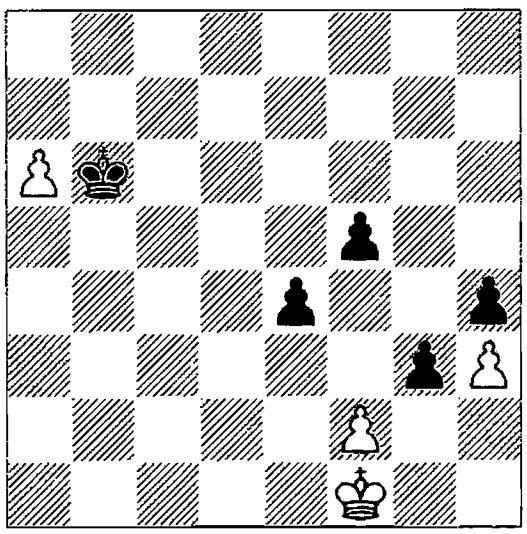
4...♔c5

4...e3? still loses to 5 ♔e2!.

5 a6 bxa6 6 bxa6 ♔b6 7 g3 fxg3 *(D)*

Not 7...hxg3? 8 h4 e3 9 f3 and White is winning.

W



8 fxg3 hxg3 9 ♔g2

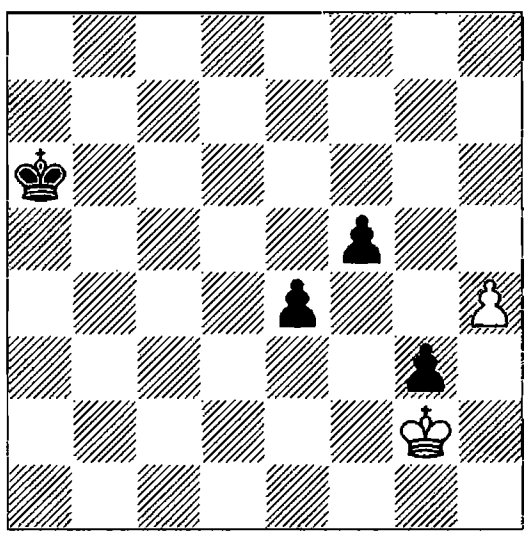
White cannot play 9 h4? due to 9...e3! 10 h5 f4 11 h6 f3 12 h7 e2+ 13 ♔e1 g2 and Black wins.

9...♔xa6!

Not 9...f4? 10 a7 ♔xa7 11 h4 ♔b6 (11...e3 12 ♔f3 stops the pawns) 12 h5 ♔c5 13 h6 ♔d4 14 h7 and Black's king arrives too late.

10 h4 *(D)*

B



At this point Black surprisingly resigned (**1-0**) although she is not worse: 10...♔b5 11 h5 ♔c4 12 h6 (12 ♔xg3 ♔d3 is also a draw) 12...e3! 13 ♔f3 (13 ♔xg3 ♔d3 14 h7 e2 15 h8♕ e1♕+ 16 ♔f3 ♕e2+ 17 ♔g3 also draws as the white king is nearly in front of the black pawn) 13...♔d3 14 h7 e2 15 h8♕ e1♕ and it's White who has to play for a draw by 16 ♕d8+ ♔c2 17 ♕c7+ ♔d1 18 ♕d7+ ♕d2 19 ♕a4+ after which Black has no winning chances since in many cases White can exchange queens.

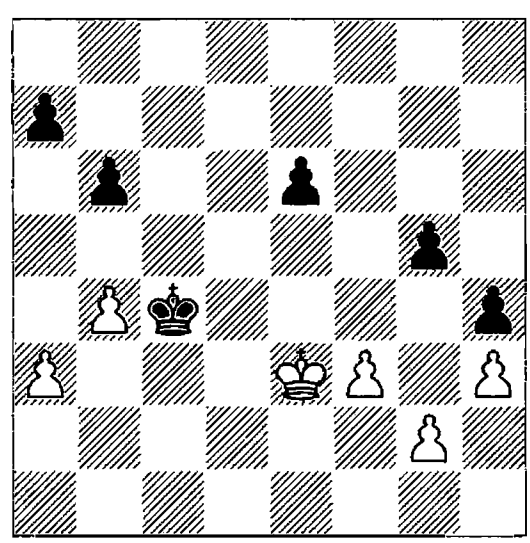
Summary:

- Positions with multiple passed pawns depend almost entirely on tactics and are very double-edged.
- Two disconnected passed pawns are often better than a pair of connected passed pawns as they are harder to stop with the king, especially if they are relatively far apart.

2.11 Surprise Moves

Unexpected moves are far from unusual in king and pawn endings and occur more often than most players imagine. We have already seen some surprising moves in the earlier parts of this chapter, but here I have selected three positions in which the best continuation struck me as being particularly hard to see. These examples should serve as reminders that it is necessary to stay alert in king and pawn endings, and to be aware that routine moves are not necessarily best. In the first example, Black found all the best moves over the board, which was quite an achievement.

B



Turzo – Vokarev
Kecskemet 1996

This is an example of a king and pawn ending in which it is hard to find the correct idea using general principles and the only way to succeed is to calculate variations. Black has the advantage due to his active king, which enables him to create a queenside passed pawn within a few moves. However, White too can make a

passed pawn by playing f4, exchanging pawns on f4 and then playing g4. The key point is that White's plan also gives Black a passed e-pawn, and Black must be ready to make use of this pawn in addition to supporting a possible passed a-pawn. His king must manoeuvre with care so as to retain enough flexibility to support either pawn.

1...a5!

The only move to win. Black improves the situation on the queenside by edging forward with his a-pawn, while leaving the king where it is until White has committed himself. 1...♔b3? allows White to escape after 2 b5! ♔xa3 3 f4 gxf4+ 4 ♔xf4 e5+! (or else White plays g4) 5 ♔f3! (not 5 ♔e3? ♔b3 6 g4 hxg3 7 h4 g2 8 ♔f2 e4 9 ♔xg2 ♔c2 10 h5 e3 11 h6 e2 12 h7 e1♕ 13 h8♕ ♕e2+ with a winning queen and pawn ending for Black) 5...♔b3 6 g4 hxg3 7 ♔xg3 ♔c3 8 ♔f3 ♔d3 9 ♔f2 ♔e4 (9...♔d2 10 ♔f3 forces a repetition) 10 ♔e2 ♔f4 11 ♔f2! ♔e4 (other moves lose) 12 ♔e2 with a draw.

1...e5? is also bad since after 2 ♔e4 ♔b3 (not 2...a5? 3 bxa5 bxa5 4 ♔xe5 a4 5 ♔f5 ♔b3 6 ♔xg5 ♔xa3 7 f4 ♔b3 8 f5 a3 9 f6 a2 10 f7 a1♕ 11 f8♕ and White has excellent winning chances in the queen and pawn ending) 3 b5 ♔xa3 4 ♔xe5 ♔b4 5 ♔f5 ♔xb5 6 ♔xg5 ♔c6 7 f4 ♔d7 8 ♔g6 ♔e7 9 ♔g7 ♔e6 10 ♔g6 it is again a draw.

2 bxa5 bxa5 3 f4 gxf4+ 4 ♔xf4 e5+!

This is the key point; if White takes the pawn, then he is one move slower to create a passed pawn on the kingside, but if he refuses it then the e-pawn becomes a major danger in its own right. After other moves White draws by playing g4.

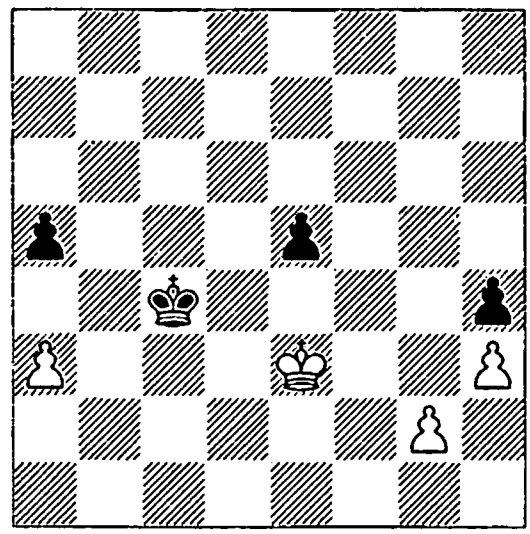
5 ♔e3 *(D)*

Or 5 ♔xe5 ♔b3 6 ♔f4 ♔xa3 7 g4 hxg3 8 ♔xg3 ♔b3 9 h4 a4 and Black's promotion will prevent White from making a queen on h8.

5...♔c3!!

A difficult move to spot, especially several moves in advance. Its purpose is simply to prevent White from pushing his g-pawn, because now Black's king is quicker to support the e-pawn. If White does nothing, Black will improve his position further by playing ...a4. Other moves only lead to a draw: 5...♔b3? 6 g4

B



hxg3 7 h4 g2 8 ♔f2 e4 9 h5 ♔c2 10 h6 e3+ 11 ♔xg2 e2 12 h7 e1♕ 13 h8♕ and Black's advantage is insufficient to win, or 5...a4? 6 g4 hxg3 7 h4 ♔c3 8 h5 g2 9 ♔f2 e4 10 h6 e3+ 11 ♔xg2 e2 12 h7 e1♕ 13 h8♕+ ♔b3 14 ♕d4 ♔xa3 15 ♕d3+ ♔b2 16 ♕b5+ with a draw.

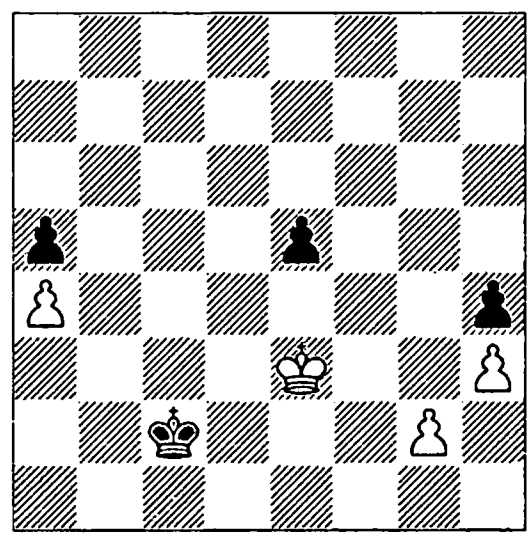
6 a4

White plays to prevent ...a4. There is nothing better; for example, 6 ♔e2 a4 only helps Black, 6 ♔e4 a4 7 ♔xe5 ♔b3 is a win for Black and 6 g4 hxg3 7 h4 g2 8 ♔f2 g1♕+ 9 ♔xg1 e4 10 h5 e3 11 h6 e2 leads to Black promoting with check.

6...♔c2! *(D)*

Another surprising move, the point of which is to put White in zugzwang. 6...♔b4? 7 g4 and 6...♔c4? 7 g4! are both drawn.

W

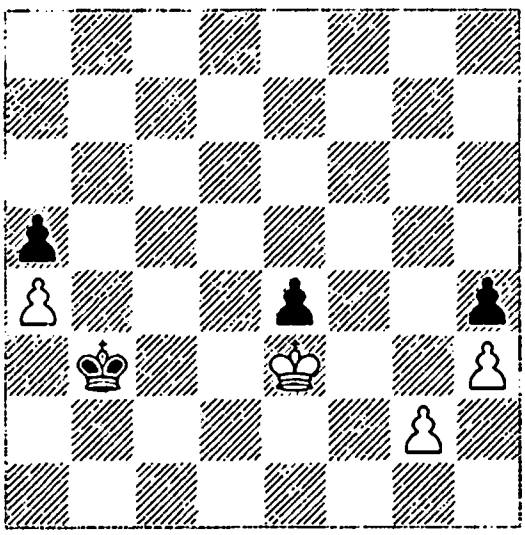


7 ♔e2

Perhaps the key line is 7 ♔e4 (after 7 ♔f3 ♔d3 8 ♔f2 e4 9 ♔e1 e3 10 ♔d1 e2+ 11 ♔e1

♔e3 Black mates in a few moves) 7...♔b3 8 ♔f3 (with the king on e4, White cannot play g4 at once and must spend a tempo on this king move) 8...e4+! (8...♔xa4? 9 g4 hxg3 10 h4 is a draw) 9 ♔e3 *(D)*.

B



9...♔b4! (another spectacular move putting White in zugzwang; 9...♔xa4?! 10 g4 hxg3 11 h4 ♔b3 12 h5 ♔c2 13 h6 g2 14 ♔f2 e3+ 15 ♔xg2 e2 16 h7 e1♕ 17 h8♕ ♕d2+ also wins, but the win is very long and complicated, requiring 70 moves to force mate) 10 ♔e2 (10 ♔xe4 ♔xa4 11 ♔f3 ♔b4 12 g4 hxg3 13 h4 a4 and Black will cover h8 when he promotes) 10...♔c4! 11 ♔e3 ♔d5 12 ♔f2 ♔d4 13 ♔e2 e3 14 ♔e1 ♔d3 15 ♔d1 e2+ 16 ♔e1 ♔e3 with a quick mate to follow.

7...e4! 8 ♔e3 ♔b3 9 g4

9 ♔e2 ♔c4 and Black wins as in the previous note.

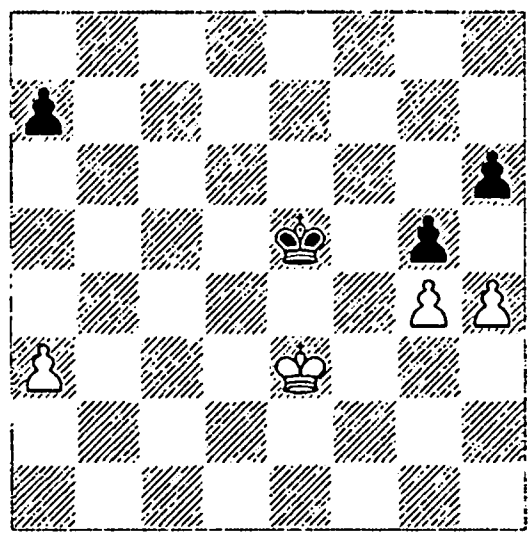
9...hxg3 10 h4 ♔c2 0-1

After 11 h5 g2 12 ♔f2 e3+ 13 ♔xg2 e2 Black is too quick.

In the next example (*see following diagram*), White starts off with the right idea, but fails to carry it through to a logical conclusion.

White appears to be doomed because after 1 h5? a6! 2 a4 a5 she loses straight away, while 1 hxg5? hxg5 2 a4 a5 3 ♔f3 (or 3 ♔d3 ♔f4 4 ♔c4 ♔xg4 and White is far too slow) 3...♔d4 4 ♔f2 ♔e4 5 ♔g3 ♔e3 6 ♔g2 ♔f4 7 ♔h3 ♔f3 8 ♔h2 ♔xg4 9 ♔g2 ♔f4 10 ♔f2 ♔e4 11 ♔g3 ♔d4 12 ♔g4 ♔c4 13 ♔xg5 ♔b4 14 ♔f4 ♔xa4 15 ♔e3 ♔b3 16 ♔d2 ♔b2 leaves White one tempo too

W



Lanchava – Fish
USSR 1988

late to save the game. No other move appears to be feasible, and I think that many players would be tempted to resign here. However, White has a remarkable way to draw.

1 a4!!

A brilliant move. It turns out that gaining space on the queenside is more important than doing something about the h-pawn. Eventually Black will have to make a run for the queenside (as in the line above after 1 hxg5?) and then it is to White's advantage to have the a-pawn as far forward as possible, because then White's king will have a better chance to reach the drawing square c1 without being cut off by Black's king.

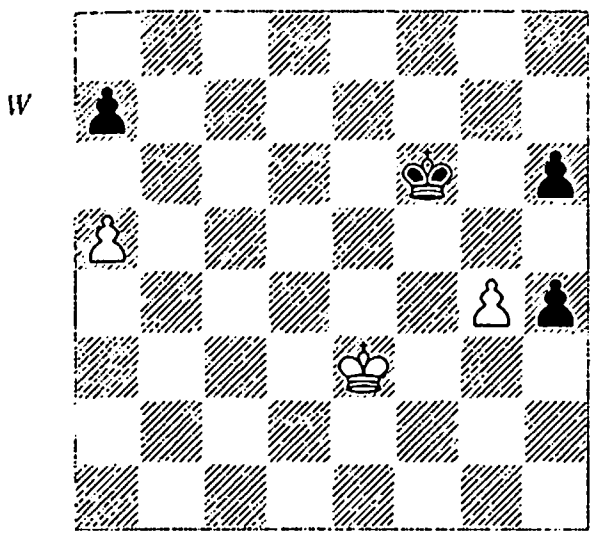
1...gxh4

Nothing else offers any chance of victory: 1...a5 2 h5! gains the opposition and draws, while 1...a6 2 hxg5! hxg5 3 a5! ♔d5 4 ♔d3 ♔c5 5 ♔e4! ♔b5 6 ♔f5 ♔xa5 7 ♔xg5 is also a draw as both sides promote at the same time. Note that the first of these lines is the reason why White should not exchange first and then play a4, because then she doesn't have the tempo move h5.

2 ♔f3?

Having set off on the correct path, White falters and allows Black to win after all. The same logic that applied last move also operates this time. White could have drawn by gaining more space on the queenside: 2 a5! ♔f6 *(D)* (after 2...♔d5 3 ♔f3 ♔c5 4 ♔g2 ♔b5 5 ♔h3 ♔xa5 6 ♔xh4 both sides will promote, while 2...a6 3 ♔f3 ♔f6 4 ♔g2 ♔g6 5 ♔h2 ♔g5 6 ♔h3 h5 7

gxh5 ♔xh5 8 ♔g2 ♔g4 9 ♔h2 ♔f4 10 ♔h3 ♔e4 11 ♔xh4 ♔d4 12 ♔g3 ♔c4 13 ♔f3 ♔b4 14 ♔e3 ♔xa5 15 ♔d2 allows White's king to make it back in time).



Now White must again find the correct move:

1) 3 ♔f4? a6! 4 ♔e4 ♔g5 5 ♔f3 h3 6 ♔g3 h2 7 ♔xh2 ♔xg4 8 ♔g2 ♔f4 and Black wins.

2) 3 ♔f3? ♔g6! is also decisive after 4 a6 ♔g5 or 4 ♔g2 ♔g5 5 ♔h3 a6.

3) 3 a6! (the same again, but this time the purpose is not only to draw Black's king to a6 in the subsequent play, but also to eliminate Black's reserve tempo) 3...♔g5 4 ♔f3 h3 5 ♔g3 h2 6 ♔xh2 ♔xg4 7 ♔g2 ♔f4 8 ♔h3 ♔e5 9 ♔h4 ♔d5 10 ♔h5 ♔c5 11 ♔xh6 ♔b5 12 ♔g5 ♔xa6 13 ♔f4. Now we can see the value of drawing Black's king all the way to a6 in order to capture White's a-pawn; if the black king were on a5 now, then ...♔b4 and ...♔c3 would win, cutting the white king off from c1. As it is, White's king can proceed unobstructed to c1, giving a draw after 13...♔b5 14 ♔e3 ♔c4 15 ♔d2 ♔b3 16 ♔c1.

2...♔f6

2...a5 is quicker, but the move played is also adequate.

3 a5

The only chance, as 3 ♔g2 ♔g5 4 ♔h3 a5 and 3 ♔f4 a5 4 ♔e3 ♔g5 5 ♔f3 h3 6 ♔g3 h2 are quite lost for White.

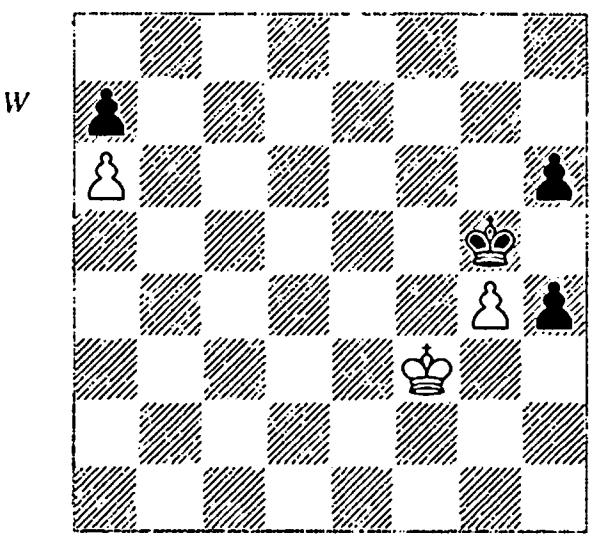
3...♔g6!

The only move to win; after 3...♔g5? 4 a6! we have transposed into the note to White's second move, while 3...a6? 4 ♔g2! ♔g6 5 ♔h2 ♔g5 6 ♔h3 h5 7 gxh5 ♔xh5 8 ♔h2 ♔g4 9 ♔g2 is also a draw.

4 a6

There is no good move: 4 ♔g2 ♔g5 5 ♔h3 a6 uses the reserve tempo to deadly effect. while 4 ♔f4 a6! 5 ♔e3 ♔g5 6 ♔f3 h3 7 ♔g3 h2 is a win we have seen before.

4...♔g5 *(D)*



Now White has to give up the g4-pawn for nothing, with the result that when Black makes a run for the queenside, White must go all the way to h6 with her king to eliminate Black's h-pawns.

5 ♔f2 ♔xg4 6 ♔g2 h3+ 7 ♔h2 ♔h4 8 ♔g1 ♔g3 9 ♔h1 ♔f3 10 ♔h2 ♔e4 11 ♔xh3 ♔d5 12 ♔g4 ♔c5 13 ♔h5 ♔b5 14 ♔xh6 ♔xa6 15 ♔g5 ♔b5 16 ♔f4 ♔c4

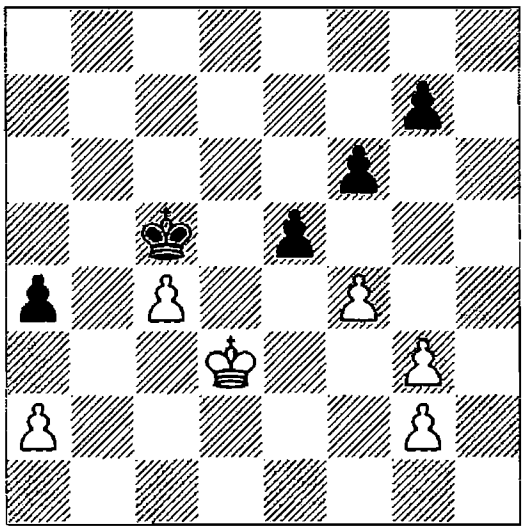
Black is just in time to head off the white king.

17 ♔e3 ♔c3 0-1

This example is relatively complex, and is worth looking at closely. The two main factors are the position of White's a-pawn (the further advanced the better, from White's point of view) and Black's possible reserve tempo with ...a6. The interaction between these factors is quite intricate, but the basic point is that White benefits on both counts by having her pawn on a6; therefore it is a priority to push the a-pawn rather than play a king move on the other side of the board.

In the next example, White started out with a surprise prove which immediately provoked a mistake by Black.

W



Berelovich – Zaninotto
Pardubice 1994

Pawn endings are often more complicated than they appear. In this position, White is a pawn up, which is usually a good start, but owing to his fractured kingside pawn-structure, Black is also able to create a passed pawn on the e-file. Once again, it is hard to work by intuition, and only calculation of concrete lines can reveal the hidden depths of the position. The position should be a draw with best play, but it is easy for Black to go wrong.

1 g4!?

At first sight this move looks crazy as it leaves the f4-pawn *en prise*. However, taking this pawn would actually lose for Black, since he can no longer make a passed pawn on the kingside and so White's c-pawn would dominate the position. Other moves allow Black to draw more easily:

1) 1 fxe5 fxe5 2 g4 e4+ 3 ♔xe4 ♔xc4 4 ♔f5 ♔c3 5 ♔g6 ♔b2 6 ♔xg7 ♔xa2 7 g5 a3 8 g6 ♔b2 9 ♔f6 a2 10 g7 a1♕ 11 g8♕ is a relatively simple draw as White's pawn is still on the second rank and Black's king is already in the optimum corner for the fight against a g-pawn.

2) 1 ♔c3 g5! (the simplest draw) 2 ♔d3 g4 3 a3 ♔c6 4 ♔e4 ♔c5 5 ♔d3 ♔c6 and there is nothing better than repetition.

3) 1 f5 ♔b4 2 a3+ ♔c5 3 ♔c3 e4 4 g4 e3 5 ♔d3 e2 6 ♔xe2 ♔xc4 7 ♔d2 is also a draw.

1...a3?

The alternatives are:

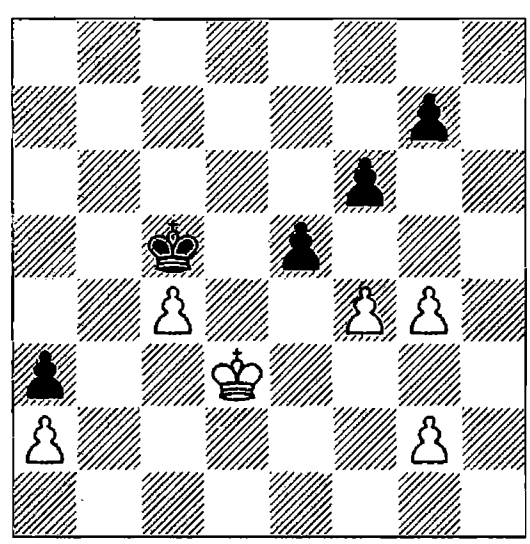
1) 1...exf4? is also wrong due to 2 ♔c3 a3 (2...g6 3 a3 g5 4 ♔d3 is similar) 3 ♔d3 g6 4 ♔c3 (Black's king is gradually pushed back) 4...♔c6 5 ♔d4 ♔d6 6 c5+ ♔c6 7 ♔c4 ♔c7 8 ♔d5 ♔d7 9 c6+ ♔c7 10 ♔c5 ♔c8 11 ♔d6 ♔d8 12 c7+ ♔c8 13 ♔c6 g5 (or 13...f5 14 gxf5 gxf5 15 ♔d6) 14 ♔d6 and White wins.

2) 1...g5! (a good move for positional reasons since it prevents any possibility of g5 by White) 2 fxe5 (2 f5? ♔b4 3 a3+ ♔c5 4 g3 e4+ even wins for Black) 2...fxe5 3 ♔e4 (3 g3 a3 4 ♔e4 ♔xc4 5 ♔xe5 ♔c3 6 ♔e4 ♔b2 7 ♔d3 is also a draw) 3...♔xc4 4 ♔xe5 a3 5 ♔f6 ♔c3 6 ♔xg5 ♔b2 7 ♔h4 ♔xa2 8 g5 ♔b2 9 g6 a2 10 g7 a1♕ 11 g8♕ ♕h1+ 12 ♔g3 ♕e1+ is a comfortable draw for Black.

3) 1...e4+! (equally effective) 2 ♔xe4 (or 2 ♔c3 g5 3 f5 e3) 2...♔xc4 3 ♔f5 a3 4 g5 fxg5 5 fxg5 ♔c3 6 ♔g6 ♔b2 7 ♔xg7 ♔xa2 8 g6 transposes to the analysis of 1 fxe5.

We now return to 1...a3? *(D)*:

W



2 ♔c3?

White squanders a fleeting chance to win. Even though general principles always have to be backed up by concrete analysis, in this case it isn't hard to find the correct move by strategic reasoning. A doubled pawn can be a serious handicap in a king and pawn ending, as it devalues your pawn-structure. If it is possible to liquidate the doubled pawn (usually by exchanging off the front pawn) it is usually a good idea to do so. Here White has trouble winning with his extra pawn precisely because of the problems created by his doubled pawn. Therefore it is logical to consider 2 g5!. Black, it is true, can then win a pawn by 2...exf4, but after

the exchange on f6 he no longer has a passed pawn, and White can win by pushing Black's king back. It's always necessary to check concrete lines before playing a move like 2 g5! (in particular, analysing the critical reply 2...e4+), but once you have had the idea to look at the move, half the battle is over.

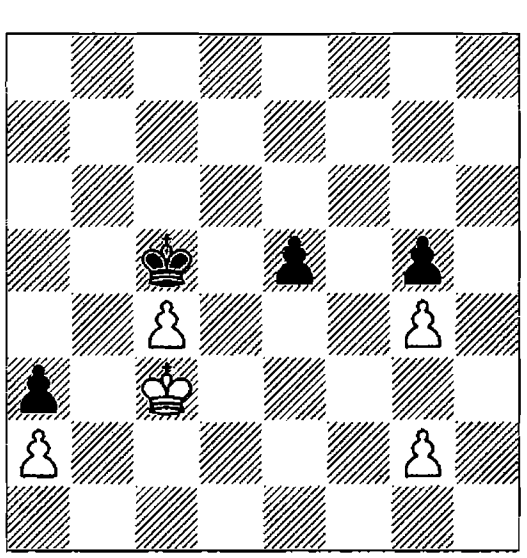
The analysis runs 2 g5! e4+ (the only chance; 2...exf4 3 gxf6 gxf6 4 ♔c3 is hopeless for Black) 3 ♔c3! (3 ♔xe4? fxg5 4 fxg5 ♔xc4 is a draw, as we have seen before) 3...fxg5 (3...f5 4 g6! is a key point, isolating the f5-pawn so that it can be undermined by g4 later; White wins after 4...♔d6 5 ♔d4 ♔c6 6 g4 fxg4 7 ♔xe4 ♔c5 8 f5, a line which makes good use of the rear g-pawn) 4 fxg5 g6 (4...e3 5 ♔d3 e2 6 ♔xe2 ♔xc4 7 ♔d2 ♔d4 8 g6 is similar) 5 g3! (it is important to keep a reserve tempo; after 5 g4? e3 6 ♔d3 e2 7 ♔xe2 ♔xc4 Black escapes with a draw) 5...e3 6 ♔d3 e2 7 ♔xe2 ♔xc4 8 ♔d2 ♔d4 9 ♔c2 ♔c4 10 g4 and White wins the a-pawn.

2...g5!

The only move, but a strong one since Black definitely prevents White from playing g5. Not 2...e4? 3 f5 and White wins easily.

3 fxe5 fxe5 *(D)*

W



4 ♔d3!

White would even lose after 4 ♔b3?, although Black's win is very difficult: 4...♔d4 5 ♔xa3 ♔xc4 6 ♔b2 ♔d3 7 a4 e4 8 a5 e3 9 a6 e2 10 a7 e1♕ 11 a8♕ ♕b4+! (the only move to win; Black must force the white king to an inferior square before taking on g4) 12 ♔c1 (12 ♔a2 ♕xg4 13 ♕d5+ ♔e2 14 ♔b3 ♔f2 15 ♔c3 ♕f4! 16 ♔d3 g4 and Black wins in much the same way) 12...♕c4+! (12...♕xg4? 13 ♕d5+ ♔e3 14 ♕d2+ draws) 13 ♔b2 ♕xg4 (there is nothing White can do to avoid the loss of his pawn, so he must try to get his king to the a8-corner, which offers the greatest drawing chances in the resulting ♕+g♙ vs ♕ position) 14 ♔a3 ♔e2 15 ♔b3 ♔f2 16 ♕d5 ♕f4! (16...♕xg2? is premature since after 17 ♕c5+ ♔f3 18 ♔a4 White's king is closer to a8; instead, Black must improve his position by pushing his pawn to g3 while keeping his queen on the fifth rank to cut off the white king) 17 ♔c3 g4 18 ♔b3 g3 19 ♔a3 ♔g1 20 ♔b3 ♔h2 21 ♔a3 ♕f2 (now that everything is ready, Black goes for the g2-pawn) 22 ♔a4 ♕xg2 and Black has reached a winning ♕+♙ vs ♕ position. However, it requires 63 moves to force mate from this point so the task facing Black is by no means simple.

The text-move is correct and leads to a clear draw.

4...♔b4 5 ♔e4 ♔xc4 6 ♔xe5 ♔c3 7 ♔e4!

The only move that doesn't lose.

7...♔b2 8 ♔d3 ♔xa2 9 ♔c2 ½-½

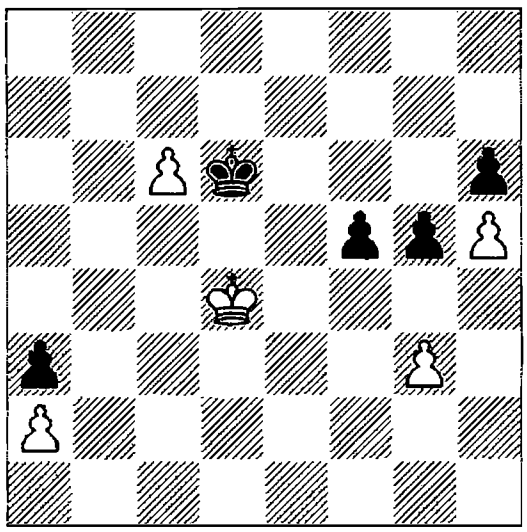
Summary:

- Unexpected moves occur relatively often in pawn endings. Such moves are unpredictable by their very nature, but there is always a logical basis for them, even if the logic is well concealed.
- Psychological factors such as determination and will-power are crucial in finding surprising moves. The player who is willing to go the extra distance looking for a hidden resource will succeed while one who gives up will not.

2.12 Stalemate

Stalemate is central to the theory of king and pawn endgames, because many basic positions, such as king and pawn vs king, often end up in stalemate. It appears less often when there are more pawns on the board and then it can easily be overlooked. In the first example, White saved the game by means of a neat stalemate resource.

W



Züger – Ru. Rodriguez
Dubai Olympiad 1986

It isn't obvious from the diagram that White can only save the game by stalemating himself.

1 c7

Since White has no waiting move, this is the only realistic possibility.

1...♔xc7 2 ♔e5 f4 3 gxf4 g4!

The best chance, as 3...gxf4 4 ♔xf4 ♔d6 5 ♔f5 ♔d5 is an easy draw.

4 ♔e4

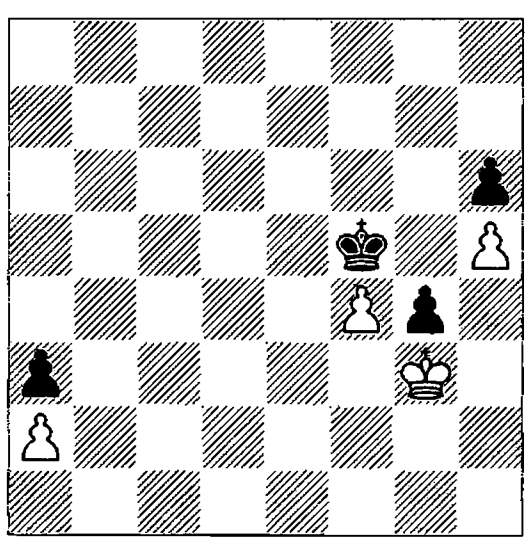
Not 4 f5? g3 5 f6 ♔d7 and Black wins.

4...♔d6 5 ♔e3!

The only move, since the alternatives 5 f5? g3 6 ♔f3 ♔e5 7 ♔xg3 ♔xf5 8 ♔f3 (8 ♔h4 ♔f4 9 ♔h3 ♔g5 is the same) 8...♔g5 9 ♔e4 ♔xh5 10 ♔f5 ♔h4 11 ♔f4 h5 12 ♔f3 ♔g5 and 5 ♔d4? ♔e6 6 ♔e4 ♔f6 7 ♔d3 (7 f5 g3 and 7 ♔e3 ♔f5 are also hopeless for White) 7...♔f5 8 ♔e3 g3 9 ♔f3 g2 10 ♔xg2 ♔xf4 allow Black to win.

5...♔d5 6 ♔f2! ♔e4 7 ♔g3 ♔f5 *(D)*

W



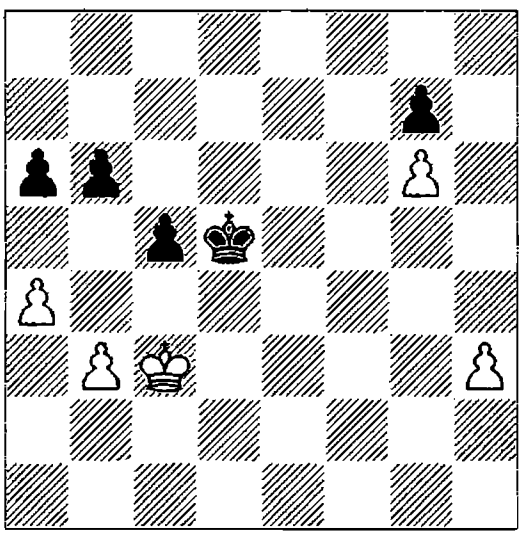
Now White is in zugzwang and must leave the f4-pawn undefended.

8 ♔h4! ½-½

However, he draws in any case since when Black takes the f-pawn (which he must do, or else he would even lose) White is stalemated.

This stalemate pattern is well worth remembering as it arises relatively frequently. In the next example, White defended ingeniously only to fall at the last hurdle.

B



Wehmeier – Slobodjan
Lippstadt 1997

Black obviously has a clear advantage because his king can march across to attack White's weak kingside pawns, but is it enough to win?

1...b5

A necessary first step; otherwise White will be able to play ♔c4 followed by a5 when the black king abandons the queenside.

2 ♔d3

At some stage White must make a decision on the queenside: should he play a5, play axb5, or leave the pawns untouched? For the moment White does not have to decide, but he cannot wait forever.

2...♔e5 3 ♔e3 ♔f5

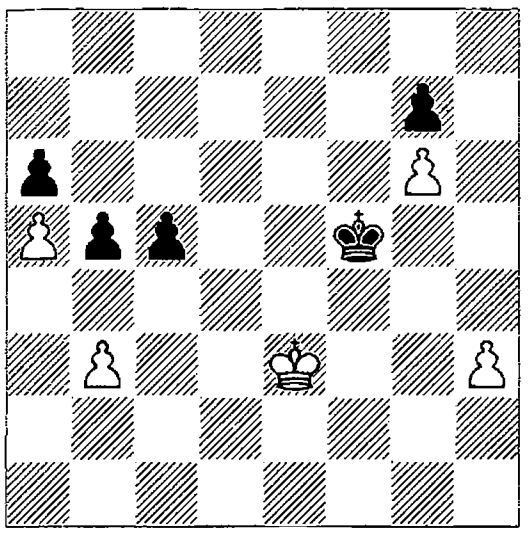
Now is the decision point since White's only chance is to wait for ...♔xg6 and then launch an attack against the black pawns by ♔e4-d5. The result will then depend on timing and the exact pawn-configuration on the queenside. Note that White has left his pawn on h3 because any

move by this pawn will speed the creation of a passed pawn on the kingside by Black.

4 a5! *(D)*

The right choice. Other moves lose: 4 axb5? axb5 5 ♔d3 ♔xg6 6 ♔e4 c4 7 bxc4 bxc4 8 ♔d4 ♔g5 9 ♔xc4 ♔h4 10 ♔d3 ♔xh3 11 ♔e2 ♔g2 and 4 ♔d3? ♔xg6 5 ♔e4 c4 6 bxc4 bxa4 7 c5 ♔f6 8 ♔d3 ♔e6 are both winning for Black.

B



4...♔e5

For the moment Black waits, but sooner or later he will have to take on g6.

5 ♔f3 ♔f5

5...♔d4 induces White to push the h-pawn, but it fails to win because White can liquidate all the pawns on the kingside: 6 h4 ♔e5 7 h5 ♔f5 8 h6 ♔xg6 9 hxg7 ♔xg7 10 ♔e4 with a draw.

6 ♔e3 ♔xg6

Black takes the plunge.

7 ♔e4 ♔f6 8 ♔d5 c4 9 bxc4 b4

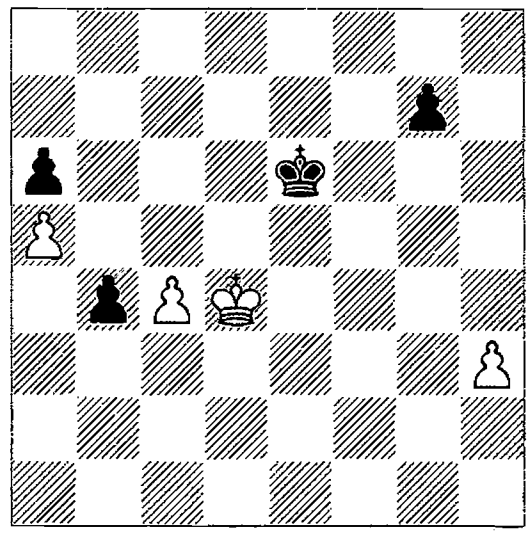
The only winning chance; now White has to retreat his king since he loses at once in the event of 10 c5? b3 11 c6 ♔e7. After the move played we have the same formation on the queenside as occurred on the kingside in the previous example, but this case is more subtle.

10 ♔d4 ♔e6 *(D)*

11 h4!

This defence is based on two points. Firstly, the queenside play will resolve itself by an exchange of the b- and c-pawns, after which Black will go after the a-pawn with his king. White's only hope is to run with his king to g7 to make a passed h-pawn. It is clearly desirable that this

W



pawn should be as far forward as possible. The second point, stalemate, is revealed in the next note.

11...♔d6

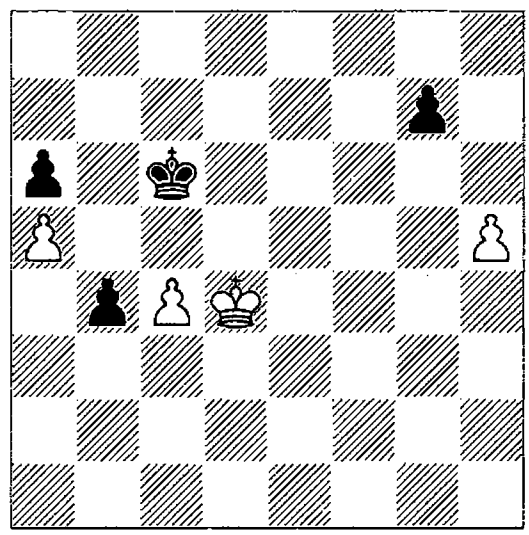
The key line is 11...g6 (this looks logical, to prevent the h-pawn from creeping further up the board) 12 ♔d3 ♔e5 13 ♔c2 ♔d4 14 ♔b3 ♔c5 (now we have the same motif as in the previous position) 15 ♔a4! ♔xc4 16 h5 b3 (16...gxh5 is the stalemate) 17 hxg6 b2 18 g7 b1♕ 19 g8♕+ and White is saved as he promotes with check.

12 h5

Now that Black's king is on d6, White cannot play for stalemate because his king has no time to reach a4.

12...♔c6 *(D)*

W



13 c5?

Having defended accurately throughout the pawn ending so far, White makes a serious

error and loses. He could have drawn by 13 ♔e4 ♔c5 14 ♔d3! (this is a position of reciprocal zugzwang) 14...b3 (the only way for Black to make progress) 15 ♔c3 b2 16 ♔xb2 ♔xc4 17 ♔c2 ♔b4 18 ♔d3 ♔xa5 19 ♔e4 ♔b6 20 ♔f5 a5 21 ♔g6 a4 22 ♔xg7 a3 23 h6 a2 24 h7 a1♕+ 25 ♔g8 and White scrapes a draw.

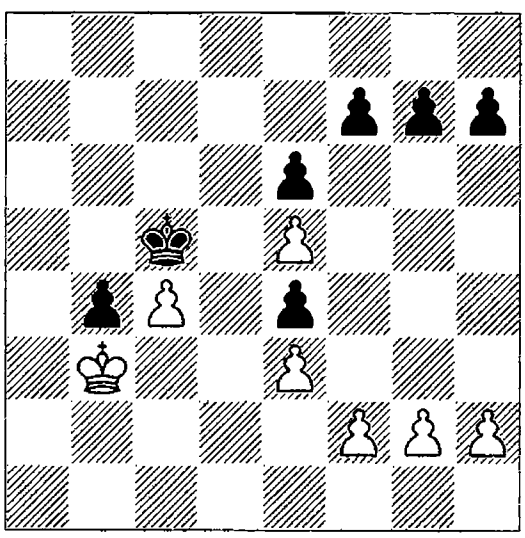
13...b3 14 ♔c3 ♔xc5 15 ♔xb3 ♔b5 16 ♔c3 ♔xa5

Now White's king is on c3 rather than d3, so it takes him one move longer to capture the g7-pawn. The upshot is that his pawn is only on the sixth rank when Black promotes.

17 ♔c4 ♔b6 18 ♔b4 ♔c6 0-1

Most stalemates that arise in over-the-board play involve a king at the edge of the board, but in the following example best play for both sides would have led to a study-like draw involving a mid-board stalemate.

B



Laveryd – Wikström
Umeå 1997

A draw would seem to be the least likely result in this position, because whoever runs out of tempo moves on the kingside will lose a pawn on the queenside, which seems likely to prove fatal. However, the result of the diagram position should be a draw thanks to an incredible stalemate resource. In the game both sides made mistakes and the point went back and forth until Black emerged the victor.

1...h6?

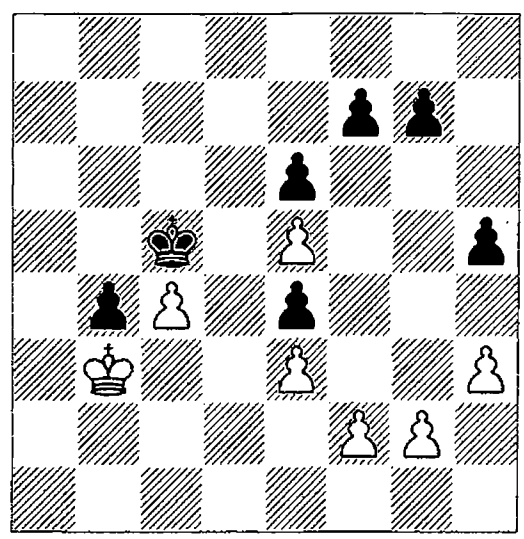
This move should lose. In view of the symmetrical position on the kingside, one might guess that the first player to move will run out of tempi first, but this is not inevitable and has to be supported by concrete analysis. It turns out that in this case the guess is correct: Black ends up having to make a king move on the queenside, but provided he arranges the kingside pawns correctly he can still save the game. The main line runs 1...h5! (the only saving move) 2 h3! (everything else loses: 2 h4? transposes to the game, while after 2 f4? exf3 3 gxf3 h4 4 h3 f5 5 exf6 gxf6 6 e4 e5 White will have to move his king) 2...f6! (again forced, as 2...h4? 3 g3! g5 4 g4 and 2...g5? 3 g3 h4 4 g4 win for White) 3 h4! (everything else loses; for example, 3 g4? h4 or 3 exf6? gxf6 4 h4 f5 5 f4 exf3 6 gxf3 e5) 3...fxe5! (3...f5? loses to 4 f4 exf3 5 gxf3 f4 6 exf4 g6 7 f5 followed by f4) 4 g4! (4 g3? g6 is winning for Black) 4...g6 (4...hxg4? loses to 5 h5) 5 g5 (now Black has run out of pawn moves and must surrender the b-pawn; however, he has managed to steer the kingside pawn-structure into a favourable form and this enables him to draw) 5...♔b6 6 ♔xb4 ♔c6 7 c5 (otherwise White cannot make progress) 7...♔d5! 8 ♔b5 stalemate.

2 h3??

Turning a win into a loss. White even had a choice of winning moves: 2 g4! g6 (or 2...f6 3 exf6 gxf6 4 h4 e5 5 h5) 3 h4 wins, while 2 h4! is equally effective after 2...h5 (or 2...g6 3 g4) 3 g4! hxg4 (3...g6 4 g5) 4 h5.

2...h5 *(D)*

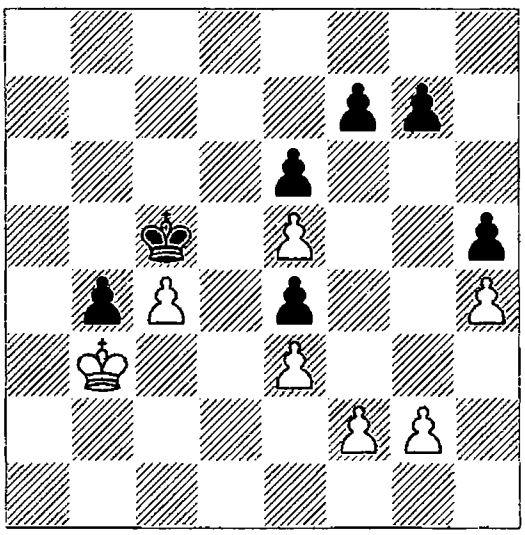
W



This is the only move to avoid losing, and it wins.

3 h4 *(D)*

B



This is an interesting position because it is symmetrical, but contrary to expectations it is the first player to move who can force his opponent to run out of tempi.

3...g5! 4 g3

4 hxg5 h4 is also winning for Black.

4...g4 0-1

Summary:

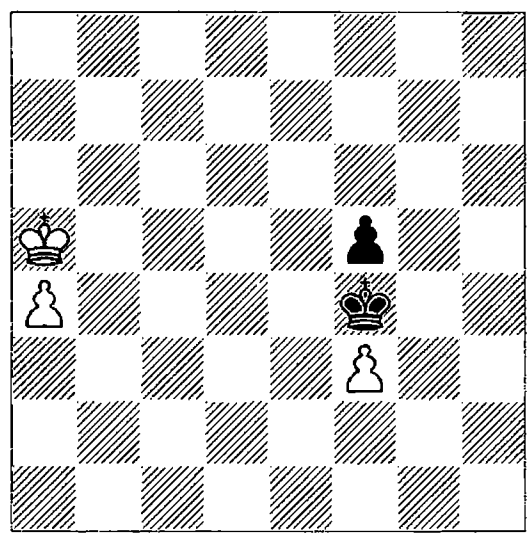
- Stalemate is fundamental to the ending of ♔+♙ vs ♔, but it also occurs occasionally in endings with more pawns.
- The stalemate pattern which arose in Züger-Ru.Rodriguez is one of the most common cases and is well worth knowing.
- In very rare cases, it is even possible for stalemate to occur with the king in the centre of the board.

2.13 Transformation to a Queen Ending

This is a major topic since many pawn endings can turn into queen endings if one or both sides promote. We shall consider queen endings in more detail later in this book (see Chapter 7) and for the moment we shall assume that readers have only a basic knowledge of queen endings. Any advanced topics which arise will either be summarized here or a cross-reference provided to the queen endings chapter. We have already seen several positions which depended on a transformation to a queen ending (for example, Lutz-Nisipeanu on page 87, Atalik-Korchnoi on page 100 and Maksimović-Čabrilo on page 103), but in this section we shall cover the topic more systematically.

In cases in which just one side promotes, it is important to have a sound knowledge of the basic ♕ vs ♙ positions. We start with a simple example.

W



Welling – Porrasmaa
Tromsø 2009

Where should White move his king? A quick check shows that when White promotes, Black will reply by advancing his pawn to the seventh rank. If you know your basic endgame theory, then you will appreciate that in general this ending is drawn, but if the white king is close enough then it is sometimes possible to win by using mating ideas. This provides the clue to the winning idea, which can then be confirmed by calculation.

1 ♔b4!

The only move to win, since the king must be able to reach c3 in order to set up a possible mate.

1...♔xf3 2 a5 f4 3 a6 ♔e2

In general, Black would prefer his king to be near the corner, since the general draw with ♕ vs f♙ involves stalemating the king on h1. But in this case, after 3...♔g2 4 a7 f3 5 a8♕ White pins the pawn and wins easily, so Black has to settle for the inferior square e2.

4 a7 f3 5 a8♕ f2

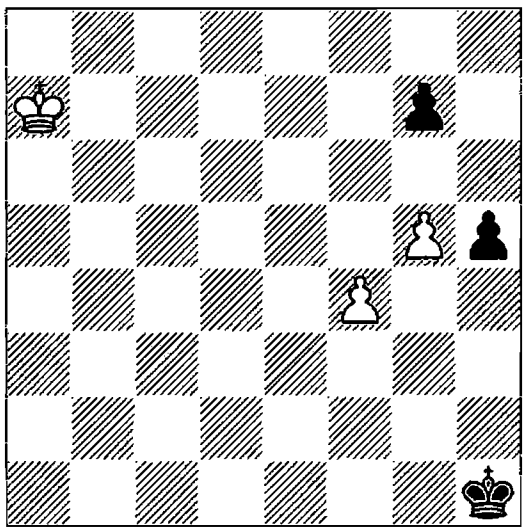
White must exploit his advantage quickly, because if Black's king crosses to g1 then the position will be a draw.

6 ♕g2! ♔e1 7 ♔c3! 1-0

White wins as 7...f1♕ 8 ♕d2# and 7...♔e2 8 ♔d4 ♔e1 9 ♔e3 both lead to mate.

The following position is a little more complex.

B



Diaz Diaz – Camacho Penate
Pinar del Rio 1996

A quick calculation shows that White will promote first, since to unblock the h-pawn Black has to move his king to the g-file, and then White promotes with check. The best Black can achieve is an ending with two pawns against a queen.

1...g6!

This is a good move and secures the draw. Contrary to Camacho Penate's notes in *Informator 65*, Black had two other methods of drawing, and it is instructive to look at these too:

1) 1...h4! 2 f5 h3 (2...♔g2?! also draws, transposing to line 2) 3 f6 gxf6 (3...♔g1? 4 fxg7 h2 5 g8♕ h1♕ 6 g6 is winning for White, which is perhaps not surprising as Black's king is far away from the drawing zone near the a1-corner; however, the win is quite long and difficult) 4 g6 f5 5 g7 f4 6 g8♕ h2! (Camacho Penate only considered 6...f3? 7 ♕c4! ♔g2 8 ♕g4+, when Black loses a pawn under unfavourable circumstances) and White cannot win as Black just pushes the f-pawn until White is forced to release the black king.

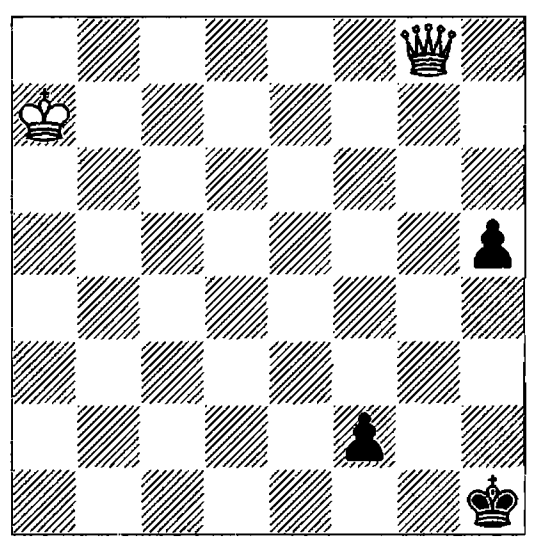
2) 1...♔g2?! (not to be recommended as a practical choice but it is remarkable that the move draws) 2 f5 h4 3 f6 g6! 4 f7 h3 5 f8♕ h2 (White has only one check) 6 ♕a8+ ♔g1 (thanks to the unfortunate position of the white king, there are no more checks) 7 ♕c6 h1♕ 8 ♕xg6 ♕h4 (this and 8...♕h8 are the only drawing moves, which is surprising since it is normally better to centralize the queen; 8...♕d5? appears natural, but loses after 9 ♕f6) 9 ♕b6+ ♔g2 10 g6 ♕a4+! and Black can draw, although with the pawn already on g6 this won't be an easy task.

2 f5 gxf5 3 g6 f4

3...h4? 4 g7 h3 5 g8♕ h2 differs from 1...h4! above in that Black's pawn is on f5 rather than f4, and this allows White to win by 6 ♕g3 f4 7 ♕f2 f3 8 ♕f1#.

4 g7 f3 5 g8♕ f2 *(D)*

W

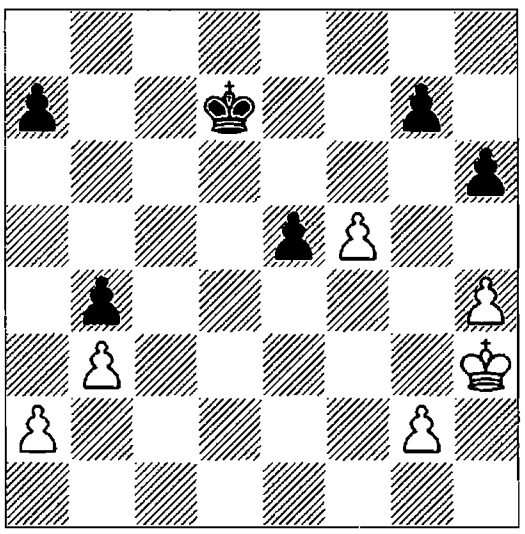


This position is a draw. If White takes the h5-pawn with check, then we have a standard ♕ vs f♙ theoretical draw, but if the h-pawn stays on the board White's queen has no access to g4, and without this it is impossible to force Black's king in front of the f-pawn. White abandoned his winning attempts after a few moves.

6 ♕f7 ♔g2 7 ♕g6+ ♔h2 8 ♕f5 ♔g2 9 ♕e4+ ♔g1 ½-½

Moving on to the more important situation in which both sides promote, the simplest case occurs when one side can launch a mating attack in the ensuing queen ending.

W



Shulman – Radonjanin
Republic of Macedonia 1995

It doesn't appear likely that Black's king will be in danger, but without the mating idea White can't win this position. Black already has a central passed pawn, while White has the possibility of making an outside passed pawn using his kingside pawn-majority. In general terms, therefore, the pawn-structure favours White and indeed if White's king were already in the centre of the board, his outside pawn-majority would swiftly prove decisive. However, the white king is poorly placed at the moment and this allows Black's king to advance in the centre and generate threats with the e-pawn. White can win, but accurate play is required.

1 g4!

This winning move is also the only one to avoid defeat, for if White allows Black to cripple his pawns with ...h5, then he cannot save the game; for example, 1 ♔g3?? h5 2 ♔f3 ♔e7 3 g4 hxg4+ 4 ♔xg4 ♔f6 5 h5 a6 and Black wins.

1...♔d6

White also wins after 1...h5 2 g5 (2 gxh5?? loses to 2...♔e7 3 ♔g3 ♔f6 4 ♔g4 a6) 2...♔d6 3 ♔g3 e4 4 ♔f4, and now:

1) 4...e3 5 ♔xe3 ♔e5 6 f6 gxf6 7 g6 ♔e6 8 ♔f4 a6 (this move proves fatal to Black as it uses up a vital reserve tempo) 9 ♔e4 f5+ (9...a5 10 ♔f4 leaves Black in zugzwang) 10 ♔f4 ♔f6 11 g7 ♔xg7 12 ♔xf5 ♔f7 13 ♔g5 ♔e6 14 ♔xh5 ♔f5 15 ♔h6 ♔f6 16 h5 a5 17 ♔h7 ♔f7 18 h6 and White wins because Black doesn't have any more reserve tempi and so must release the white king.

2) 4...♔d5 5 g6 (5 f6? is wrong: 5...gxf6 6 g6 ♔e6 7 ♔xe4 f5+ 8 ♔f4 ♔f6 9 g7 ♔xg7 10 ♔xf5 and in contrast to the analysis of 4...e3, Black still has two reserve tempi on the queenside, so after 10...♔f7 11 ♔g5 ♔e6 12 ♔xh5 ♔f5 13 ♔h6 ♔f6 14 h5 a6! 15 ♔h7 ♔f7 16 h6 a5 he can keep the white king imprisoned) 5...e3 6 f6 e2 7 fxg7 e1♕ 8 g8♕+ ♔c5 9 ♕f8+ ♔b5 10 ♕f5+ ♔b6 11 ♕f6+ ♔b7 12 g7 and White wins easily since his king can evade the checks by hiding on h8.

2 ♔g3

After 2 g5? hxg5 3 hxg5 e4 4 ♔g4 ♔e5 it's time to force a draw by 5 f6 gxf6 6 gxf6 ♔xf6 7 ♔f4.

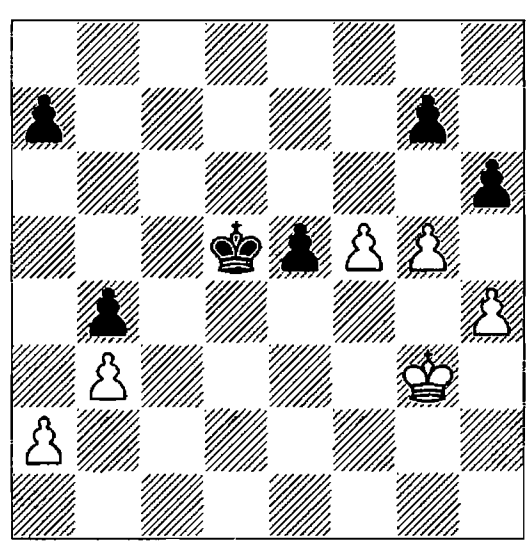
2...♔d5

Or 2...e4 3 ♔f4 e3 4 ♔xe3 ♔e5 5 ♔f3 h5 6 ♔g3 (simply waiting) 6...♔e4 (6...a6 7 ♔f3 a5 8 ♔g3 doesn't change anything) 7 f6 gxf6 8 gxh5 ♔f5 9 ♔f3 with a simple win.

3 g5 *(D)*

3 ♔f3?? loses after 3...e4+ 4 ♔e3 ♔e5 5 h5 a6.

B



3...hxg5

3...h5 4 g6! followed by f6 promotes a pawn.

4 hxg5!

4 h5? is only a draw after 4...e4 5 f6 ♔e6 6 fxg7 ♔f7 7 h6 ♔g8! 8 ♔g4 ♔f7, as White cannot make progress.

4...e4 5 ♔f4 ♔d4

White also wins after 5...e3 6 ♔xe3 ♔e5 7 f6 gxf6 8 g6 ♔e6 9 ♔f4 a6 10 ♔g4 a5 11 ♔f4 f5 12 g7 ♔f7 13 ♔xf5.

6 f6

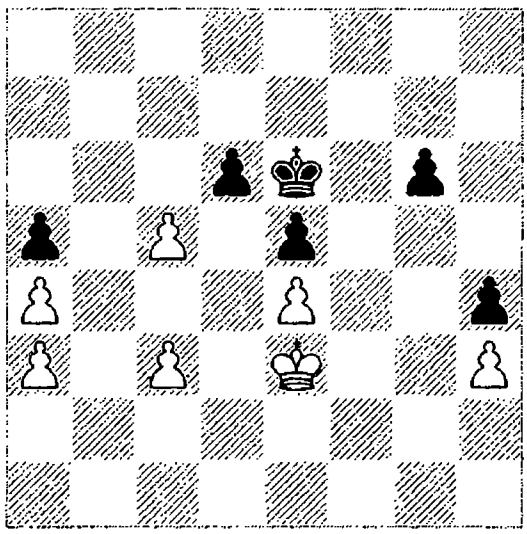
Not 6 g6? e3 7 f6 e2 8 fxg7 e1♕ 9 g8♕ ♕f2+ 10 ♔g5 ♕g3+ 11 ♔h6 ♕h2+ 12 ♔g7 ♕e5+, when Black gives perpetual check.

6...gxf6 7 g6 1-0

Black resigned without waiting for White to demonstrate the point of his play: 7...e3 8 g7 e2 9 g8♕ e1♕ 10 ♕c4# and Black's king is mated in the middle of the board. It is unusual for such a study-like finish to occur in a game without an alternative win at some point.

In the following position, perpetual check and stalemate both play a part after both sides promote.

B



D. Huerta – B. Martinez
Cuba 2002

Sometimes it's impossible to know what is going through the heads of players and annotators. The game ended in a draw and annotator Nogueiras (in *Informator 84*) gave Black's first move a double exclamation mark on the grounds that it was the only move to draw, yet the diagram position is an easy win for Black. The position is instructive not only for the 'mass hallucination' aspect of the annotations, but also for the way Black managed to save the game after his incorrect first move.

1...d5??

The winning line is 1...dxc5 (what could be more natural than simply taking the pawn, leaving Black effectively a pawn ahead thanks to the doubled white a-pawns?) 2 ♔f3 ♔f6 3 ♔g4 g5 4 ♔h5 and here Nogueiras gave a 'winning for White' symbol, but of course 4...c4 wins for Black instead, since 5 ♔g4 ♔g6 and 5 ♔h6 g4 are hopeless for White. After this initial error the rest of the game was conducted accurately.

2 c6

Black is now in a difficult position and can only save the game by ingenious play.

2...g5

2...dxe4? is wrong and loses after 3 ♔xe4 ♔d6 (3...g5 4 c7 ♔d7 5 ♔f5! is also winning for White) 4 c7 ♔xc7 5 ♔xe5 ♔c6 6 ♔f6 ♔c5 7 ♔xg6 ♔c4 8 ♔g5 ♔b3 9 c4! ♔xa4 (or 9...♔xc4 10 ♔xh4) 10 ♔xh4 ♔xa3 11 c5.

3 exd5+ ♔d6

It is remarkable that White cannot win despite his two extra pawns.

4 ♔f3

The main alternative is 4 ♔f2 (4 c4?? even loses after 4...g4) but Black draws in any case by 4...g4 5 hxg4 e4 6 g5 h3 7 g6 e3+ 8 ♔e2 (8 ♔xe3 h2 9 g7 h1♕ 10 g8♕ ♕e1+ draws at once) 8...h2 9 g7 h1♕ 10 g8♕ ♕h2+ 11 ♔xe3 (or 11 ♔d3 ♕d2+ and it is a draw after 12 ♔c4 ♕e2+ or 12 ♔e4 ♕c2+ 13 ♔xe3 ♕xc3+) 11...♕e5+ (it is perhaps surprising that White cannot win despite the four extra pawns, but thanks to his out-of-play queen he can only escape from Black's checks at the cost of a major concession) 12 ♔f2 ♕f4+ 13 ♔g1 (this is the only way to evade Black's checks) 13...♕e3+ 14 ♔h2 ♕e2+ 15 ♕g2 ♕h5+ 16 ♔g1 ♕d1+ 17 ♕f1 ♕xd5 (now that White's queen has returned, there is no perpetual check, but Black can draw by instead working to reduce White's material advantage) 18 ♕f6+ ♔c7 19 ♔f2 ♕d2+ 20 ♔f3 ♕d3+ 21 ♔g4 ♕e2+ and it will be a draw as White can only stop the checks by jettisoning more queenside pawns.

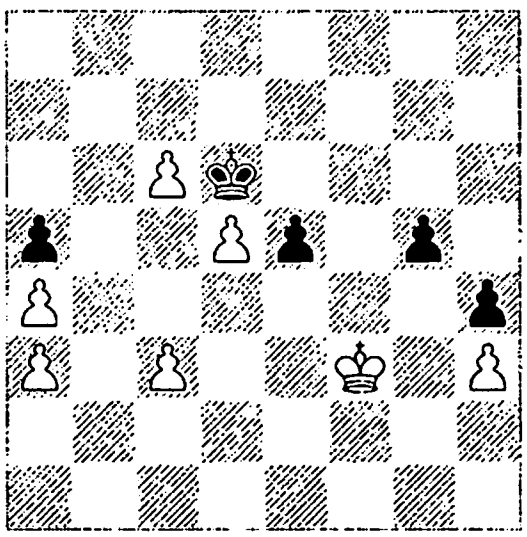
We now return to 4 ♔f3 *(D)*:

4...♔c7!

Black must wait, and this is his only waiting move.

5 c4

Or 5 ♔f2 ♔d6! (5...g4? doesn't work when Black's king is on c7: 6 hxg4 e4 7 g5 h3 8 g6 e3+ 9 ♔e2! h2 10 g7 h1♕ 11 g8♕ ♕h2+ 12 ♔d3! ♕d2+ 13 ♔c4 ♕a2+ 14 ♔c5 ♕xa3+ 15 ♔d4 ♕xa4+ 16 ♔xe3 and White evades the checks and wins) 6 c4 g4 (now this works) 7 hxg4 e4 8 g5 h3 9 g6 (if at any stage White


B

plays c5+, Black replies ...♔c7, transposing into the game) 9...e3+ 10 ♔e2 h2 11 g7 h1♕ 12 g8♕ ♕h2+ 13 ♔xe3 ♕e5+ 14 ♔f3 (White cannot escape from the checks as in the note to White's fourth move since d4 is not covered and so 14 ♔f2 can now be met by 14...♕d4+) 14...♕f5+ 15 ♔g3 ♕e5+ with perpetual check much as in the note to White's fourth move.

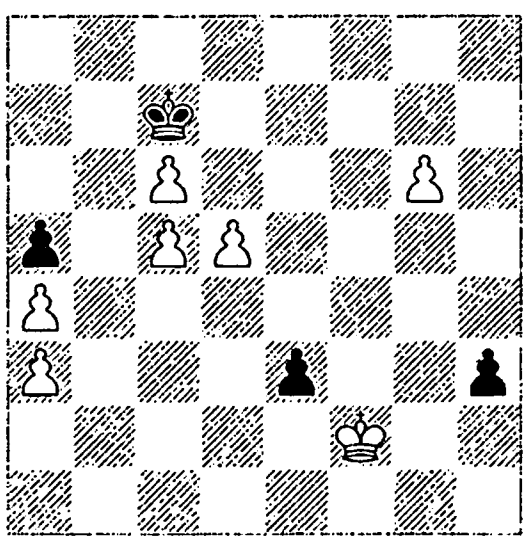
5...♔d6 6 c5+

6 ♔f2 transposes into the previous note.

6...♔c7

Now White has run out of moves with his c-pawn and must move his king. This is a position of reciprocal zugzwang.

7 ♔f2 g4 8 hxg4 e4 9 g5 h3 10 g6 e3+ *(D)*


W

11 ♔xe3

11 ♔e2 also draws after 11...h2 12 g7 h1♕ 13 g8♕ ♕h2+ 14 ♔f3 (14 ♔xe3 ♕f4+!) 14...♕f2+ 15 ♔e4 ♕c2+ 16 ♔e5 ♕h2+ 17 ♔e6 ♕h3+ 18 ♔e7 ♕h4+.

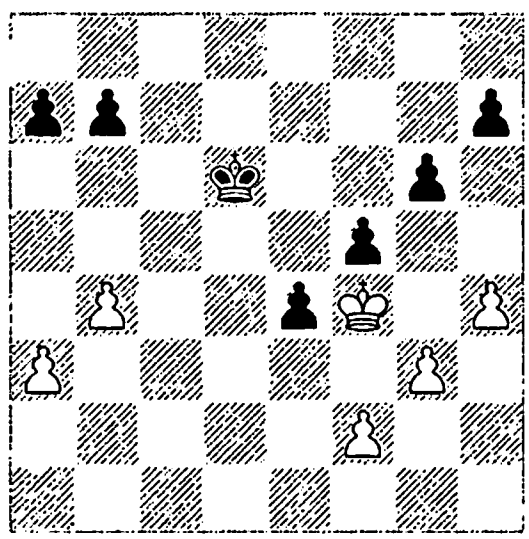
11...h2 12 g7 h1♕ 13 g8♕

After 13 d6+ ♔xc6 14 g8♕ ♕e1+ Black gives perpetual check.

13...♕f3+! ½-½

Black can also give perpetual check, but the stalemate is simpler.

In many cases, the result of the queen ending is determined by the possibility of one side forcing the exchange of queens, creating a complete circle of pawn ending to queen ending and back to pawn ending. In the next example, Black overlooked a win based on this idea.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Serper – Safin
Bishkek Zonal 1993

Black is a pawn ahead, but he faces a counterattack by White based on ♔g5 and ♔h6. It's wrong for Black to meet this by passively retreating his king to g8, expecting to drive White's king back later, because White can break up Black's pawns by h5. There's only one move for Black which wins convincingly, but Safin was unable to find it in the game.

1...b6?

This is too slow and allows White to draw. Here are the alternatives:

1) 1...♔e6? 2 ♔g5 ♔f7 3 ♔h6 ♔g8 4 a4 b6 5 b5 and it's time for Black to force a draw by 5...♔f8 6 ♔xh7 ♔f7 7 ♔h8! (7 ♔h6? loses to 7...♔f6 8 ♔h7 g5) 7...♔f8 with a repetition of moves.

2) 1...♔d5? 2 ♔g5 ♔d4 3 ♔h6 ♔d3 4 ♔xh7 ♔e2 5 ♔xg6 ♔xf2 6 h5 e3 7 h6 e2 8 h7 e1♕ 9

h8♕ ♕e4 10 ♕h2+ ♔f3 11 ♔f6! and White should have no trouble drawing.

3) 1...h6! is correct, with a long but forced win: 2 h5 (after 2 g4 ♔e6 3 gxf5+ gxf5 White's king soon has to retreat) 2...gxh5 3 ♔xf5 ♔d5 4 ♔g6 ♔d4 5 ♔xh5 ♔d3 6 ♔xh6 ♔e2 7 g4 ♔xf2 8 g5 e3 9 g6 e2 10 g7 e1♕ 11 g8♕ ♕h1+ (Black wins by forcing a queen swap) 12 ♔g7 ♕g2+ 13 ♔f8 ♕xg8+ 14 ♔xg8 ♔e3 15 ♔f7 ♔d4 16 ♔e6 ♔c4 17 ♔d7 ♔b3 18 b5 (or 18 ♔c7 b5) 18...♔xa3 19 ♔c7 b6 and Black wins.

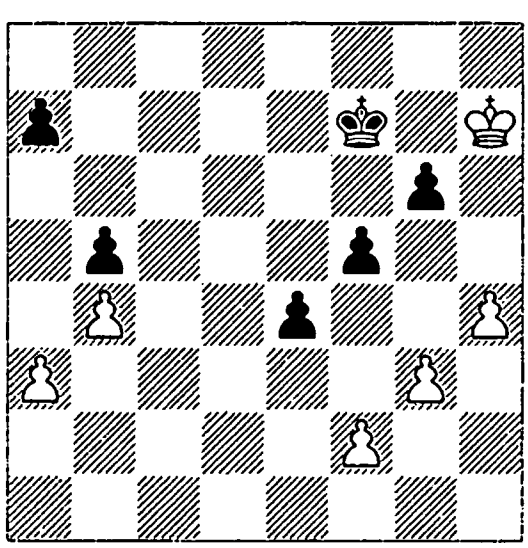
2 ♔g5!

2 b5? would give Black a second chance to find the winning move 2...h6!.

2...♔e6?!

After this there are no winning chances at all. Black could at least have tried 2...♔e5, but even here accurate defence enables White to hold on: 3 b5! (3 ♔h6?! is less accurate as 3...f4 4 gxf4+ ♔xf4 5 ♔xh7 ♔f3 6 ♔xg6 ♔xf2 7 h5 e3 8 h6 e2 9 h7 e1♕ 10 h8♕ ♕e4+ 11 ♔g5 ♕e3+ 12 ♔f5 ♕xa3 gives Black some winning chances) 3...♔d4 4 ♔h6 ♔d3 5 ♔xh7 ♔e2 6 ♔xg6 ♔xf2 7 h5 e3 8 h6 e2 9 h7 e1♕ 10 h8♕ ♕e4 11 ♕h2+ ♔f3 12 ♔f6 and White should hold the draw quite easily.

3 ♔h6 b5 4 ♔xh7 ♔f7 *(D)*



5 ♔h8

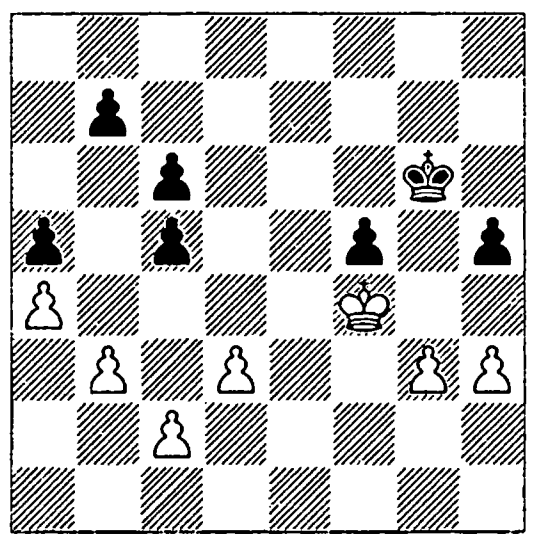
5 ♔h6 also draws.

5...♔f8

5...♔f6 6 ♔g8 a6 7 ♔f8 g5 8 hxg5+ ♔xg5 9 ♔f7 f4 10 gxf4+ ♔xf4 11 ♔e6 ♔g4! is another drawing line.

6 ♔h7 ♔f7 7 ♔h8 ♔f8 ½-½

In the following example, there are various possibilities for a transformation to a queen ending. It turns out that the result depends on relatively slight changes in the queenside pawn-structure, and in order to win White has to arrange the queenside pawns favourably **before** heading for the queen ending.



Levitina – Saunina
USSR 1970

1 ♔e5!

According to Yudovich in *Informator 10*, this is a losing move and White should have played 1 h4 in order to secure a draw, but this is wrong since Levitina's move is correct and should win for White. 1 h4? does indeed lead to a draw after 1...♔f6 2 c4 b6 3 ♔f3 ♔e5 4 ♔e3, when neither side can achieve anything.

1...♔g5

Forced, as White was threatening 2 h4.

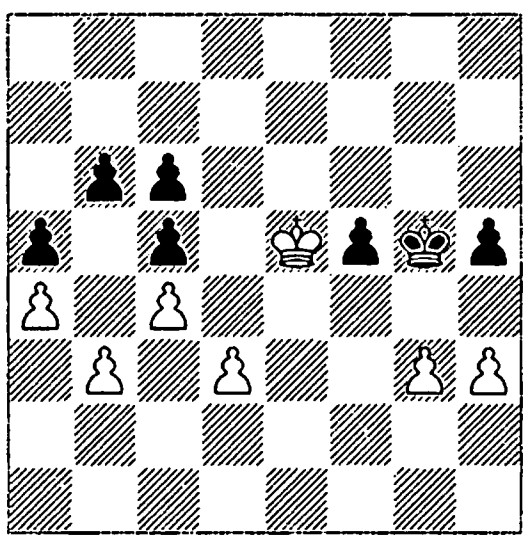
2 c4?

This move throws away the first half-point. White could have won by 2 c3! b5 (after 2...b6 3 c4 White wins straight away; it is worth noting that this position is reciprocal zugzwang) 3 c4 b4 (the crucial difference between this position and the one arising in the game is that Black's pawn is on b4 rather than b6, and so White's king can reach the c6-pawn via c5) 4 d4! cxd4 5 ♔xd4 f4 (5...h4 6 gxh4+ ♔xh4 7 ♔e5 ♔g5 8 c5 f4 9 ♔e4 also wins for White) 6 h4+ ♔g4 7 gxf4 ♔xf4 (after 7...♔xh4 8 f5 ♔g5 9 ♔e5 h4 10 f6 White wins Black's queen after both sides promote) 8 ♔c5 ♔g4 9 ♔xc6 ♔xh4 10 ♔b6 ♔g3 11 c5 h4 12 c6 h3 13 c7 h2 14 c8♕

h1♕ 15 ♕b8+ followed by ♔xa5, with an easy win for White as Black loses both his queenside pawns and his king is far away.

2...b6 *(D)*

Now the reciprocal zugzwang arises with White to play.



3 ♔d6?

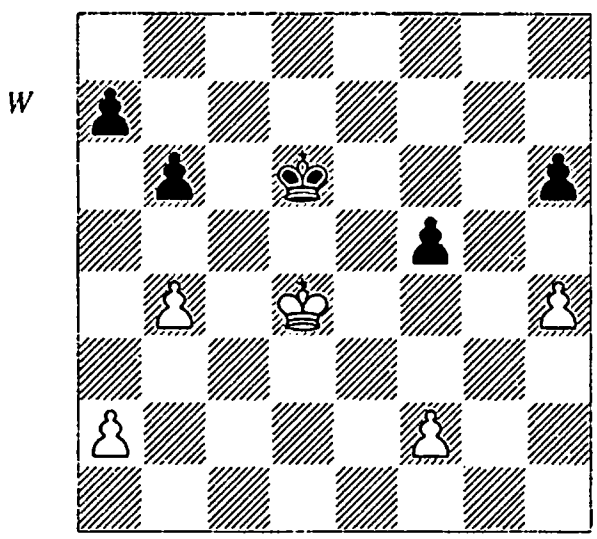
Handing over the second half-point. White should have played 3 d4 cxd4 4 ♔xd4 ♔f6 (4...h4? 5 gxh4+ ♔xh4 6 ♔e5 ♔g5 7 h4+ ♔g4 8 h5 f4 9 h6 f3 10 h7 f2 11 h8♕ f1♕ 12 ♕g8+ ♔h5 13 ♕e8+ ♔h4 14 ♕d8+ ♔h3 15 ♕xb6 is winning for White in view of the weakness of Black's remaining queenside pawns) 5 c5 (forcing Black to defend accurately; if White is satisfied with a draw, the simple 5 ♔d3 or 5 ♔e3 is sufficient) 5...b5 (5...bxc5+?! 6 ♔xc5 ♔g5 7 ♔d6 h4 8 gxh4+ ♔xh4 9 ♔e5 ♔g5 10 h4+ ♔g4 11 h5 f4 12 h6 f3 13 h7 f2 14 h8♕ f1♕ 15 ♕g8+ ♔h5 16 ♔d6 favours White, although probably not enough to win) 6 axb5 cxb5 7 c6 ♔e7 8 ♔c5 a4 9 bxa4 bxa4 10 ♔b6 a3 11 c7 a2 12 c8♕ a1♕ 13 ♕xf5 ♕f6+ with a draw.

3...h4 4 gxh4+ ♔f6!

This was almost certainly the point overlooked by White. After 4...♔xh4? 5 ♔e5! ♔g5 6 h4+ ♔g4 7 h5 White reaches a favourable queen ending, but now Black promotes whereas White does not.

5 ♔xc6 f4 6 ♔xb6 f3 0-1

The following example is again decided by the possibility of forcing a queen exchange, although here it is a little more complicated as queen endings arise in various lines and evaluating some of these is not so easy.



Nesterov – Zolnierowicz
Katowice 1993

King and pawn endings in which both sides have a choice of pawn moves can prove tricky to calculate. Any pawn move changes the structure of the position and that can alter the result of any races which arise. Keeping a clear head when calculating such lines is not easy, and it proved too much for the players in this example. Moreover, Nesterov's analysis in *Informator 58* overlooks several important points.

1 a4?

Nesterov believed this move wins and gave it an exclamation mark, but it actually throws the win away. White had two superior moves, one which probably wins and one which definitely wins:

1) 1 a3! leads to a very favourable queen ending, even against the best defence:

1a) 1...a6 2 a4 h5 3 f3! (3 f4? a5 is a draw) 3...♔e6 4 a5 bxa5 5 bxa5 ♔d6 6 f4 and White wins.

1b) 1...♔e6 2 a4 ♔d6 (2...h5 transposes to line 1c) 3 h5 ♔e6 4 ♔c4 ♔e5 5 ♔b5 ♔f4 6 ♔a6 ♔f3 7 ♔xa7 ♔xf2 8 ♔xb6 f4 9 a5 f3 10 a6 ♔g3 11 a7 f2 12 a8♕ f1♕ 13 ♕d5 must be winning, since White is a pawn up and has a passed pawn well supported by his king.

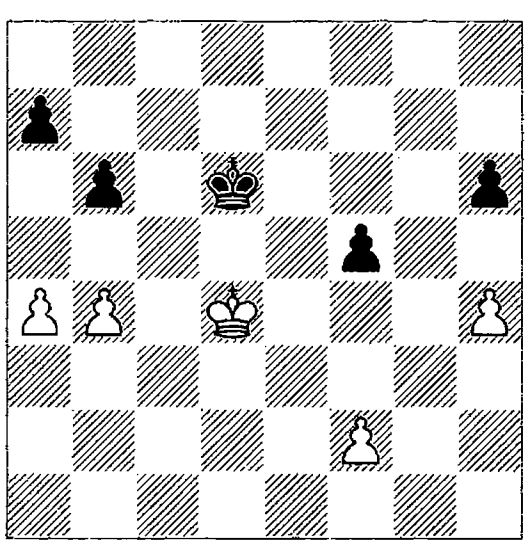
1c) 1...h5 2 a4 ♔e6 3 ♔c4 ♔e5 (3...♔d6 4 ♔b5 ♔c7 5 ♔a6 ♔b8 6 f4 ♔a8 7 a5 bxa5 8 ♔xa5 ♔b7 9 ♔b5 ♔c7 10 ♔c5 ♔b7 11 ♔d6 ♔b6 12 ♔e6 and White wins as he promotes on

f8 with check) 4 ♔b5 ♔f4 5 ♔a6 ♔f3 6 ♔xa7 ♔xf2 7 ♔xb6! (7 b5 f4 8 a5 bxa5 9 b6 ♔g2 10 b7 f3 11 b8♕ f2 is a draw as Black's king can't be forced in front of the pawn) 7...f4 8 a5 f3 9 a6 ♔g1 10 a7 f2 11 a8♕ f1♕ 12 ♕e4 and while White's advantage is not quite as large as in line 1b, this is very likely also to be winning.

2) 1 h5!! (this is strongest of all since White wins without allowing Black to enter a queen ending) 1...♔e6 2 a4! (2 a3? ♔f6! exploits the negative side of h5 to threaten ...♔g5 and thus force 3 f4, but then 3...♔e6 4 ♔c4 a6 leads to a complete blockade) 2...♔f6 (after 2...♔d6 3 a5 b5 4 a6 ♔e6 5 ♔c5 White wins easily) 3 f4 ♔e6 4 ♔c4 (White is a tempo ahead of the line arising after 2 a3? and now 4...a6 is impossible due to 5 a5 bxa5 6 bxa5 ♔d6 7 ♔d4) 4...♔d6 5 ♔b5 ♔c7 (5...♔d5 6 ♔a6 ♔e4 7 ♔xa7 ♔xf4 8 a5 bxa5 9 b5 ♔g4 10 b6 f4 11 b7 f3 12 b8♕ f2 is an easy win because Black's king is not yet supporting the f-pawn; for example, 13 ♕b1 ♔g3 14 ♕f1 a4 15 ♔b6 a3 16 ♔c5 a2 17 ♔d4 a1♕+ 18 ♕xa1 ♔g2 19 ♔e4 and White wins) 6 ♔a6 ♔b8 7 a5! bxa5 8 bxa5 ♔a8 9 ♔b5 ♔b7 10 a6+ ♔c7 11 ♔c5 ♔d7 12 ♔d5 ♔c7 13 ♔e5 and White promotes first.

We now return to 1 a4? *(D)*:

B



1...♔e6?

Black returns the compliment and makes a fatal mistake, just when he could have saved the game by 1...h5! 2 a5 (2 f3 a6 3 f4 a5 and 2 ♔c4 ♔c6 are also drawn) 2...bxa5 3 bxa5 ♔c6 4 ♔e5 ♔b5 5 ♔xf5 ♔xa5 6 f4 ♔b6 7 ♔g6 a5 8 f5 a4 9 f6 a3 10 f7 a2 11 f8♕ a1♕, reaching a queen ending which is drawn according to the tablebase, although White would have a few winning chances in practice. The main point is that 12 ♕f6+ ♕xf6+ 13 ♔xf6 is only a draw after 13...♔c6 14 ♔g6 ♔d6 15 ♔xh5 ♔e7 16 ♔g6 ♔f8, as Black is just in time.

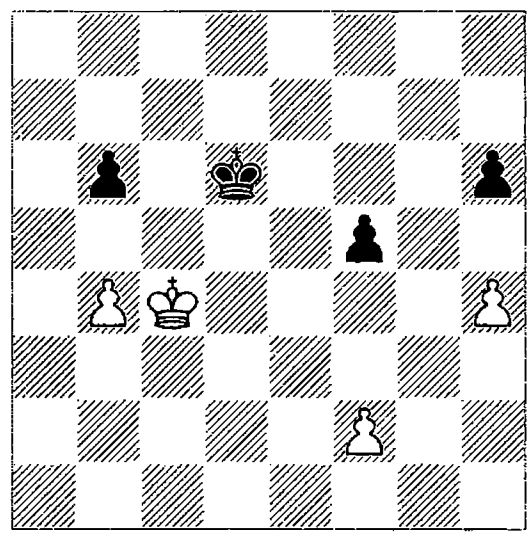
2 a5!

The strongest move.

2...♔d6 3 axb6 axb6 4 ♔c4? *(D)*

Nesterov incorrectly believed that this move is winning, but it allows Black to draw. The only move to win is 4 h5!, and after 4...♔c6 (4...♔e6 5 ♔c4 ♔d6 6 ♔b5 ♔c7 7 ♔a6 ♔c6 8 f4! costs Black his b-pawn, while after 4...b5 5 f4 White wins thanks to the opposition) 5 ♔e5 ♔b5 6 ♔xf5 ♔xb4 7 ♔e5! play transposes to the game at move 7.

B



4...♔c6?

Missing his chance.

1) 4...♔e5? also loses after 5 ♔b5 ♔f4 6 ♔xb6 ♔f3 7 ♔c6 ♔xf2 8 b5 f4 9 b6 f3 10 b7 ♔g2 11 b8♕ f2 12 ♕g8+ ♔h2 13 ♕f7 ♔g2 14 h5 f1♕ 15 ♕xf1+ ♔xf1 16 ♔d5 ♔e2 17 ♔e4 and White wins the pawn ending.

2) 4...f4! is the drawing move:

2a) 5 ♔b5 ♔c7 6 f3 (6 ♔a6? even loses after 6...♔c6) 6...h5 and White must play 7 ♔c4 or he loses.

2b) 5 ♔d4 ♔c6 6 ♔e4 ♔b5 7 ♔xf4 ♔xb4 8 ♔e5 (this is the same position as in the game at move 7, except that White's pawn is on h4 rather than h5; as we shall, this changes the result of the position) 8...♔c3 9 f4 b5 10 f5 b4 11 f6 b3 12 f7 b2 13 f8♕ b1♕ 14 ♕c5+ ♔d3!

(14...♔d2? 15 ♕f2+ ♔c3 16 ♕d4+ and White wins by exchanging queens) 15 ♕d4+ ♔e2! 16 ♕e4+ ♕xe4+ 17 ♔xe4 h5 18 ♔f5 ♔e3 19 ♔g5 ♔e4 and the game will be drawn.

5 h5!

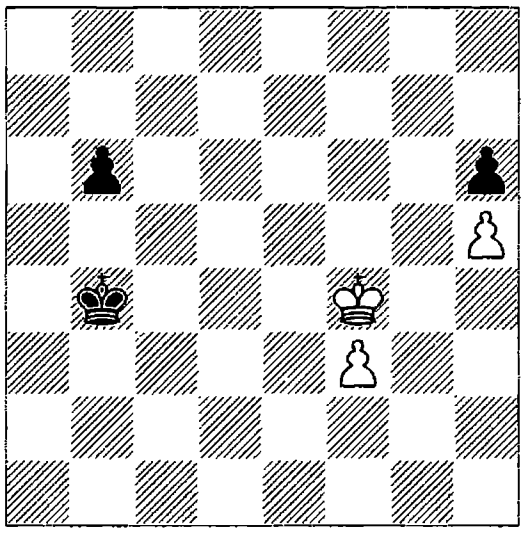
Now White is back on track and handles the rest of the game convincingly.

5...f4

5...b5+ 6 ♔d4 ♔d6 7 f4 is also winning for White.

6 f3! ♔d6 7 ♔d4 ♔c6 8 ♔e4 ♔b5 9 ♔xf4 ♔xb4 *(D)*

W



10 ♔e5! ♔c3

After other king moves, White either wins Black's queen or forces an immediate queen exchange once both sides promote: 10...♔c5 11 f4 ♔c6 12 ♔e6 b5 13 f5 b4 14 f6 b3 15 f7 b2 16 f8♕ b1♕ 17 ♕c8+ or 10...♔c4 11 f4 b5 12 f5 b4 13 f6 b3 14 f7 b2 15 f8♕ b1♕ 16 ♕c8+.

11 f4 b5 12 f5 b4 13 f6 b3 14 f7 b2 15 f8♕ b1♕ 16 ♕c5+ ♔d2

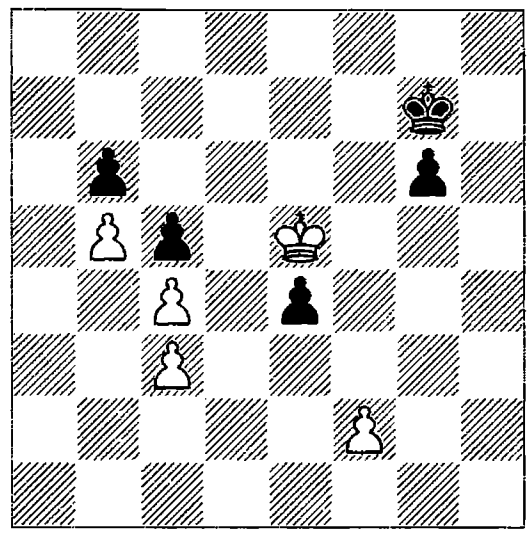
16...♔d3 17 ♕d4+ followed by ♕e4+, winning.

17 ♕f2+ 1-0

After 17...♔c3 18 ♕d4+ White exchanges queens and wins easily.

The following game is well-known for its finish, but the earlier stages are also very instructive. In order to understand the analysis, it is important to be aware that ♕+c♙ vs ♕ is generally a win, except if the defender's king has a chance to get in front of the pawn.

B



Bilek – Heidenfeld
Lugano Olympiad 1968

This tricky position should be a draw, but the saving line is not especially obvious. Curiously, Milić's notes in *Informator 6* indicate no errors by either side until the very end.

1...♔f7 2 ♔d5!?

The best try, although it should not succeed against accurate defence. 2 ♔xe4 ♔e6 is a draw; for example, 3 ♔f4 (3 f4 ♔d6 4 f5 is a draw after 4...g5 or 4...gxf5+) 3...♔f6 4 ♔g4 g5 5 f4 gxf4 6 ♔xf4 ♔e6 7 ♔e4 ♔d6 8 ♔f5 ♔d7 9 ♔f6 ♔d6 and Black can maintain the opposition.

2 ♔f4 sets the trap 2...♔e6? 3 ♔xe4 ♔d6 4 ♔f4 ♔e6 5 ♔g5 ♔f7 6 f3! ♔g7 7 f4 ♔f7 8 f5 gxf5 9 ♔xf5 and White gains the opposition (and thus the position with ♔e4 vs ♔e6 is reciprocal zugzwang). However, provided Black plays 2...♔f6!, so as to meet ♔xe4 by ...♔e6, White cannot win.

2...♔f6?

This move should lose. 2...♔e7? is also bad; e.g., 3 ♔c6 g5 4 ♔xb6 g4 5 ♔a6 (5 ♔xc5?? even loses after 5...g3 6 fxg3 e3 because Black's king can stop the b-pawn) 5...e3 6 fxe3 g3 7 b6 g2 8 b7 g1♕ 9 b8♕ ♕xe3 (after 9...♕a1+ 10 ♔b7 ♕h1+ 11 ♔b6 ♕b1+ 12 ♔c7 the checks run out) 10 ♕c7+ ♔f6 11 ♔b6 ♕xc3 12 ♕xc5 and White wins, since with a c4-pawn Black's king needs to be able to get in front of the pawn to draw.

The drawing idea is the surprising 2...e3! 3 fxe3 g5 4 ♔e5 (4 ♔e4? ♔e6 wins for Black) 4...♔g6! 5 e4 g4 6 ♔f4 ♔h5 7 e5 g3! 8 ♔xg3 (8 e6 ♔g6 is the same) 8...♔g5 9 ♔f3 ♔f5 10 e6

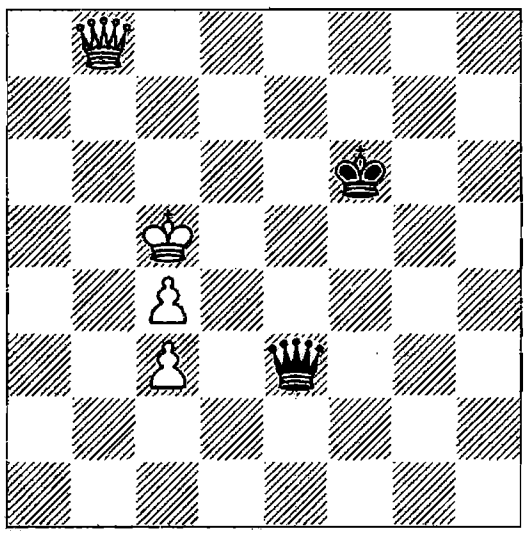
♔xe6 11 ♔e4 ♔d6 12 ♔f5 ♔d7 and again Black can maintain the opposition.

3 ♔c6 g5 4 ♔xb6 g4 5 ♔xc5 e3

5...g3 6 fxg3 e3 7 b6 e2 8 b7 e1♕ 9 b8♕ is no better since after 9...♕f2+ 10 ♔c6 ♕g2+ 11 ♔b6 ♕b2+ 12 ♔c7 the checks run out.

6 fxe3 g3 7 b6 g2 8 b7 g1♕ 9 b8♕ ♕xe3+ *(D)*

W



The ending of ♕ + doubled pawn vs ♕ doesn't occur very often, so it is worth summarizing the general result. If the defending king is in front of the pawns, then it is a win with bishop's pawns or centre pawns but a draw with rook's pawns or knight's pawns. However, many of the wins are quite lengthy and complex, especially if the pawns are far back. If the defending king is not in front of the pawns, then the attacker should win even with knight's pawns. However, rook's pawns are still usually drawn. In this position White has the favourable c-pawns and in addition the defender's king is cut off, which should make for a relatively easy win. The tablebases confirm this assessment, since it takes White only 37 moves of accurate play to force mate from the diagram, which places it in the 'fairly easy' category.

10 ♔b4 ♕c1 11 ♕d6+ ♔g5 12 ♕d5+ ♔h4 13 c5 ♕b2+ 14 ♕b3 ♕f2! 15 ♕c4+ ♔h3 16 ♔b3 ♕e3 17 ♕d5 ♔h2 18 ♔c2?!

Several times White makes things harder for himself by being too subtle. Here the direct 18 c6 was very strong, since 18...♕b6+ 19 ♔c2 ♕f2+ 20 ♕d2 ♔h1 doesn't save Black after 21 c7 ♕f5+ 22 ♔b2 ♕b5+ 23 ♔c1.

18...♕f2+!

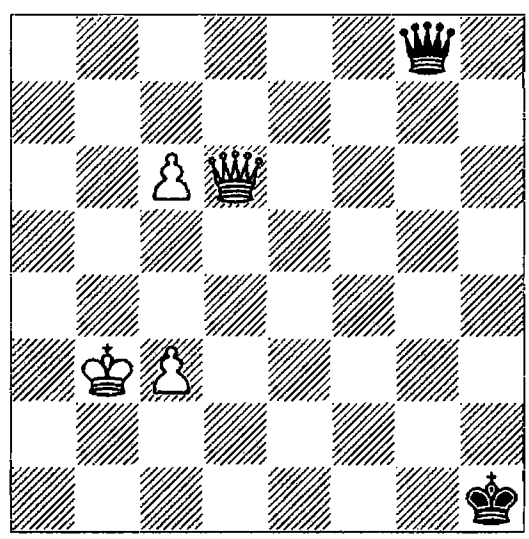
The same stalemate idea allows Black to continue his resistance.

19 ♕d2 ♔h1 20 c6 ♕f5+ 21 ♔c1 ♕e5 22 ♕d1+ ♔h2 23 ♕f3 ♕g5+ 24 ♔c2 ♕g6+ 25 ♔b2 ♕d6 26 ♔b3 ♕c7 27 ♔c4 ♔g1 28 ♕d5 ♔h2 29 ♕d2+ ♔h1 30 ♕d1+ ♔h2 31 ♕d7 ♕f4+ 32 ♔b3 ♕b8+ 33 ♔c2 ♕g8 34 ♕d6+ ♔h1 35 ♔b2?!

Once again, White creates difficulties by his reluctance to advance his pawn. After 35 c7 ♕a2+ (or 35...♕g2+ 36 ♔c1 ♕g5+ 37 ♕d2 ♕c5 38 ♕h6+ ♔g2 39 ♕g7+ ♔f1 40 ♕f7+ and after one more check White can promote his pawn) 36 ♔d3 ♕b1+ 37 ♔d4 ♕g1+ (or 37...♕d1+ 38 ♔c5 ♕g1+ 39 ♕d4) 38 ♔c4 ♕g4+ 39 ♔c5 the checks run out and White wins easily.

35...♕g2+ 36 ♔b3 ♕g8+ *(D)*

W



37 c4??

A horrible blunder. 37 ♔b4 would still have won. One line is 37...♕g4+ 38 ♔b5 ♕e2+ 39 ♔b6 ♕b2+ 40 ♕b4 ♕f2+ 41 ♔b7 ♕g2 42 ♕h4+ ♔g1 43 ♕c4 ♔h1 44 ♔b8 and White wins.

37...♕g3+! ½-½

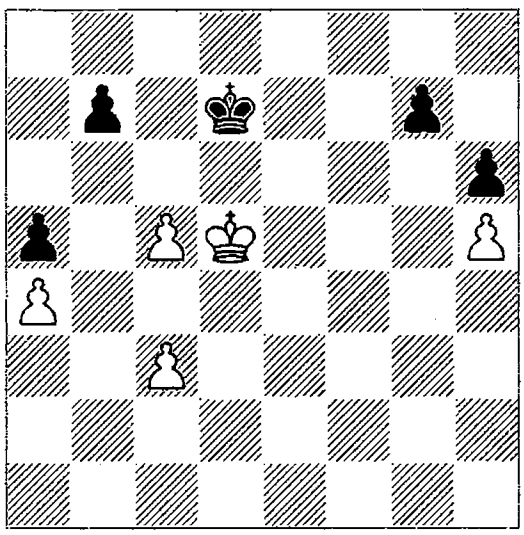
Black didn't miss it!

The remainder of this section deals with the important practical case in which one player has the option of reaching an ending with ♕+♙ vs ♕. This is known to be the most complex of all 5-man endings, with many long and complicated winning lines. It may even be hard to

assess whether a particular position is winning, but there are some general principles to bear in mind. If the defender gets his king in front of the pawn, the result is almost always a draw, so we may assume that the defender's king is cut off. The best winning chances are with a bishop's pawn when, as mentioned above, the defender usually loses except if he has a chance to get his king in front of the pawn. A centre pawn offers almost as many winning chances as a bishop's pawn. With a knight's pawn, the defender has a drawing idea that did not exist with the more central pawns: he can play his king to the corner diagonally opposite the pawn's queening square. If he can get there, the result is usually a draw. With a rook's pawn, the result is generally a draw.

The first point to mention is that if you can win without reaching ♕+♙ vs ♕ at all, then that is the better choice.

B



Ganguly – Prakash
New Delhi 2008

It is often important to make practical decisions in pawn endings. If it is possible to avoid a long and complex queen ending, then it is generally advisable to do so. Even if the queen ending is winning, it is easy to go wrong in such endings and forcing a decision in the pawn ending is far preferable, if only because it saves a great deal of energy. In this respect, analysing with a computer may be misleading, because an engine with access to tablebases will often happily head for an incredibly complex win with ♕+♙ vs ♕ rather than force a decision in the pawn ending.

In this position, both sides have defects in their pawn-structure: Black's kingside majority is crippled, while White's queenside majority includes a doubled pawn. Black immediately faces a critical decision: should he move his king to the queenside or the kingside?

1...♔c7?

This is a mistake, allowing White a surprising winning possibility. Moving the other way leads to a clear draw: 1...♔e7! (now Black is threatening to push his g-pawn, as he is close enough to stop White's pawn after hxg6) 2 ♔e5 (2 c6 bxc6+ 3 ♔xc6 g5 4 hxg6 h5 5 ♔d5 h4 6 ♔e4 ♔f6 is also a draw) 2...♔d7 3 ♔f5 ♔c6 4 ♔g6 ♔xc5 5 ♔xg7 b5 6 ♔xh6 bxa4 7 ♔g6 a3 8 h6 a2 9 h7 a1♕ 10 h8♕ is obviously drawn.

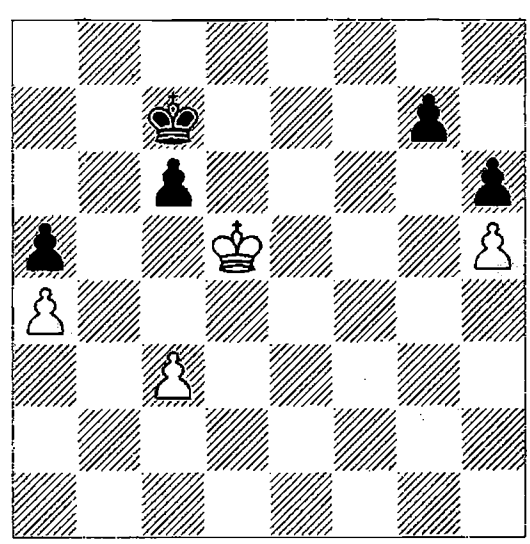
2 c6!

The only move to win. By sacrificing a pawn, White improves the situation on the queenside by creating extra space for his king. Since the situation on the queenside is hopeless for Black, he will be forced to run with his king to the kingside, but under less favourable circumstances than on the first move.

2...bxc6+ *(D)*

After 2...b6 3 c4 ♔c8 4 ♔d6 ♔d8 5 c7+ ♔c8 6 ♔c6 Black is forced to commit suicide by pushing a pawn.

W



3 ♔c5?!

Not a very practical decision, even if the computer is quite happy with it. After this an ending with ♕+♙ vs ♕+♙ arises in which

White is indeed winning, but the win requires considerable work. Had White played 3 ♔e6!, then he would have won without any complications at all: 3...♔b6 (3...♔d8 4 ♔f7 and 3...c5 4 ♔f7 ♔d7 5 ♔xg7 ♔e7 6 ♔xh6 ♔f6 7 c4 are simple wins for White) and now White even has a choice between 4 ♔d6 ♔b7 5 c4 ♔b6 6 c5+ ♔b7 7 ♔d7 and 4 ♔f7 ♔c5 5 ♔xg7 ♔c4 6 ♔xh6 ♔xc3 7 ♔g7 c5 8 h6 c4 9 h7 ♔b2 10 h8♕ c3 11 ♕b8+ ♔a2 12 ♕c7 ♔b2 13 ♕xa5, which are both straightforward wins.

3...♔d7

3...♔b7 4 ♔d6 ♔b6 5 c4 ♔b7 6 c5 and White wins as before.

4 ♔b6

The race is on.

4...♔e6 5 ♔xa5 g5 6 hxg6 h5 7 ♔b6 h4 8 a5 h3 9 g7 ♔f7 10 g8♕+

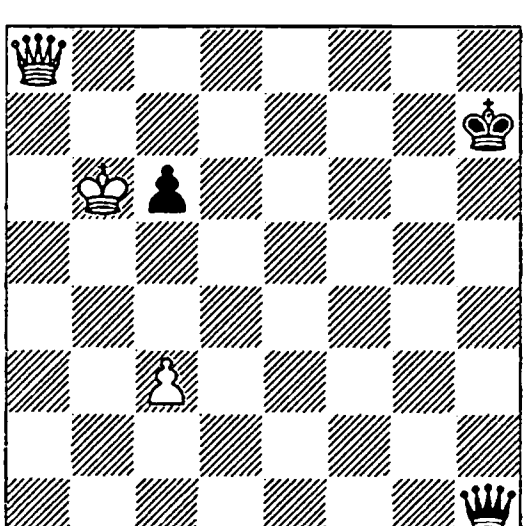
White must make sure he promotes with check. 10 a6 h2 11 a7 h1♕ 12 a8♕? (12 g8♕+ still wins) 12...♕g1+! 13 ♔c7 ♕g3+ 14 ♔b7 ♕xg7 allows Black to activate his queen and only leads to a draw.

10...♔xg8 11 a6 h2 12 a7 h1♕ 13 a8♕+

The c-pawn is the most favourable pawn the attacker can have in ♕+♙ vs ♕ (together with the f-pawn, of course) and the defender usually only has drawing chances if his king is close to moving in front of the pawn. That is not the case here, so the position looks lost, a view confirmed by the tablebase. In the game the story ended happily for White as Black didn't put up the maximum resistance, but had he done so, White might have regretted his decision at move three.

13...♔h7 *(D)*

W



14 ♕b7+

14 ♕xc6 is the quickest method, but White, perhaps being unsure that this is really a win, gives some checks in the hope of finding a better moment to take the pawn.

14...♔h8 15 ♕c8+ ♔h7 16 ♕d7+ ♔h8 17 ♕c8+ ♔h7 18 ♕f5+ ♔h8 19 c4

This is not a bad plan. White seizes the opportunity to advance his pawn, since the c6-pawn will inevitably fall sooner or later.

19...c5?

Losing instantly. 19...♔g7 offers much more resistance, although after 20 c5 ♕g2 21 ♕d7+ ♔f8 22 ♕xc6 ♕b2+ 23 ♔c7 ♕g7+ 24 ♔c8 ♕a1 25 ♕d6+ ♔f7 26 c6 the pawn advances and White should win in due course.

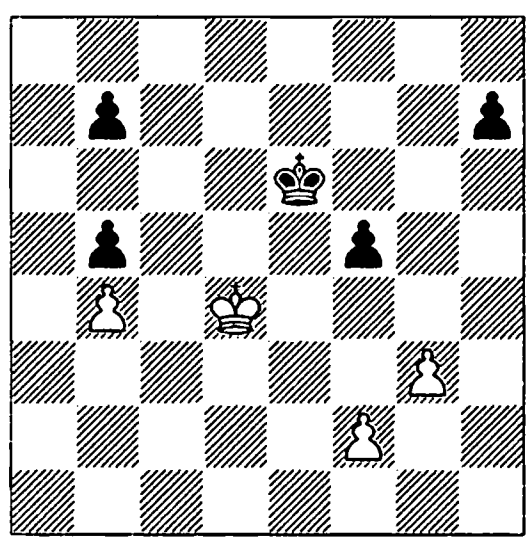
20 ♕c8+ ♔g7 21 ♕b7+

Forcing the exchange of queens.

21...♕xb7+ 22 ♔xb7 ♔f7 23 ♔c6 ♔e7 24 ♔xc5 ♔d7 25 ♔b6 ♔c8 26 ♔c6 1-0

A somewhat similar situation arose in the next example.

B



Sedina – Galliamova
European Ch (women), Varna 2002

Black is a pawn up, but the doubled pawn means that the win is not automatic. In the game Black found a way to liquidate to a winning ending of queen and pawn against queen and eventually netted the full point, but only after a considerable struggle. In practice, it is important to bear in kind that while some positions are theoretically winning or theoretically drawing, the practical difficulties involved in reaching the

indicated result may make it worth searching for alternative possibilities. Sedina's notes didn't mention any alternatives for Black in this ending and she explicitly gave Black's simplest winning line as leading to a draw. During the game, Black never allowed the win to slip, so from a godlike perspective Black's play was accurate. However, it was certainly possible to win without allowing White to reach a ♕ vs ♕+♙ ending, and from the practical perspective it would certainly have been better to do so. Not only would this have drastically shortened the current game, but it would also have saved quite a lot of energy which might have been better employed in other games in the tournament.

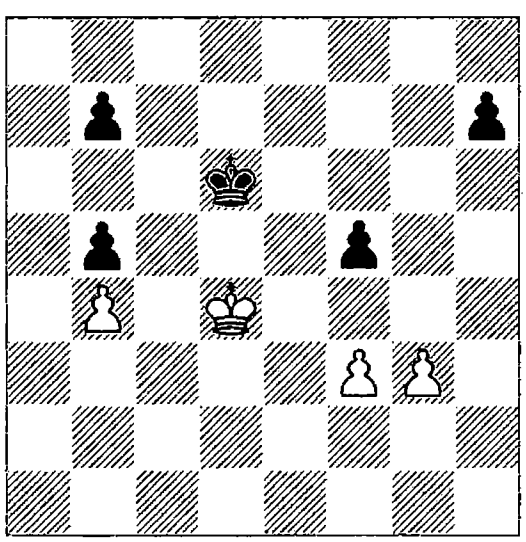
1...♔d6?!

1...h5! is the simplest win for Black: 2 ♔c5 f4 3 ♔xb5 ♔d5! (Sedina only considered 3...fxg3? 4 fxg3 ♔f5 5 ♔b6, which indeed leads to a draw) 4 ♔b6 ♔c4 5 b5 (5 gxf4 h4 6 f5 ♔d5 is also a win for Black) 5...f3! 6 ♔xb7 ♔xb5 followed by heading for the f2-pawn.

1...b6? is wrong, however, and allows White to draw by 2 f3 h6 (2...h5 3 f4 ♔d6 4 ♔e3 ♔d5 5 ♔d3 and 2...♔d6 3 g4 ♔e6 4 g5 are also drawn) 3 ♔e3 ♔e5 4 g4 ♔d5 5 ♔d3 ♔e6 6 ♔e2! (the only move, maintaining the distant opposition) 6...♔f6 7 ♔f2 ♔g5 8 ♔g3.

2 f3 *(D)*

B



2...♔e6!

The only winning move. 2...h5? 3 f4 is an immediate draw, while 2...h6? 3 g4 ♔e6 4 ♔c5 ♔e5 5 ♔xb5 ♔d4 (5...fxg4 6 fxg4 ♔f4 7 ♔b6 draws at once) 6 ♔b6 f4 7 ♔xb7 ♔e3 8 b5 ♔xf3 9 b6 ♔xg4 10 ♔c6 f3 11 b7 f2 12 b8♕ f1♕ leads to a ♕+♙ vs ♕ position which White shouldn't have much trouble defending as Black's h-pawn is only on the third rank.

3 ♔c5

3 g4 loses after 3...♔f6 4 ♔e3 ♔g5 and White is forced to exchange on f5.

3...♔e5?!

After this move Black is committed to winning a tricky ♕+♙ vs ♕ position. Instead, she could have won more directly by 3...f4! 4 g4 ♔e5 5 ♔xb5 ♔d4 6 ♔b6 and now Black has a choice of wins:

1) 6...♔e3! 7 ♔xb7 ♔xf3 8 b5 ♔e4! 9 b6 f3 10 ♔c6 (otherwise Black swaps queens immediately after both sides promote) 10...f2 11 b7 f1♕ 12 b8♕ ♕f6+! 13 ♔d7 (13 ♔c5 ♕c3+ also forces the queen swap) 13...♕f7+ 14 ♔c6 ♕d5+ and next move Black exchanges queens, with a simple win.

2) 6...♔c4! 7 b5 h6 8 ♔xb7 ♔xb5 also wins easily.

4 ♔xb5?!

Giving Black a second chance to simplify the win. 4 f4+ ♔e4 5 ♔xb5 would have forced Black's hand.

4...h5?!

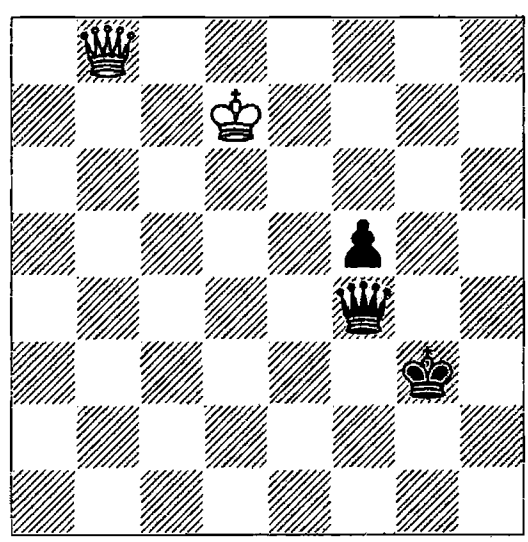
4...f4 5 g4 ♔d4 gives Black a simple win as before.

5 f4+

Now White takes her chance. 5 ♔b6?! f4 is easy for Black.

5...♔e4 6 ♔b6 ♔f3 7 ♔xb7 ♔xg3 8 b5 h4 9 b6 h3 10 ♔c7 h2 11 b7 h1♕ 12 b8♕ ♕c1+ 13 ♔d7 ♕xf4 *(D)*

W



This ending is winning for Black, but it's 51 moves to mate, which puts it in the medium difficulty category. The f- and c-pawns are the most favourable pawns to have in an ending of ♕+♙ vs ♕, and in most cases the defender only has drawing chances if her king has a chance to move in front of the pawn. That is not the case here, so it's not hard to assess the position as winning for Black, although actually winning it is no easy task. The details of the remainder of the game are not really relevant to the discussion, so I shall give only brief notes.

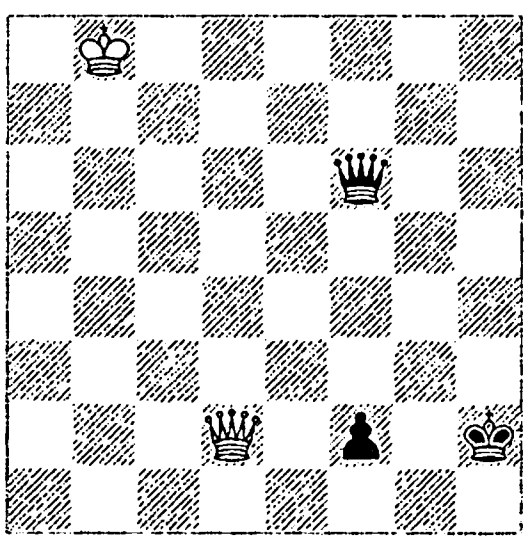
14 ♕b3+ ♔h4?!

This costs Black 13 moves. 14...♕f3 is better.

15 ♕b2 ♕e4 16 ♕f6+ ♔g4 17 ♕g6+

17 ♕g7+ is more resilient.

17...♔f3 18 ♕h5+ ♔e3 19 ♕h3+ ♔d4 20 ♕h8+ ♕e5 21 ♕h4+ f4 22 ♔c8 ♔e4 23 ♔b7 ♕c3 24 ♕h7+ ♔e3 25 ♕e7+ ♔f2 26 ♕h4+ ♕g3 27 ♕f6 ♕b3+ 28 ♔a6 ♕c4+ 29 ♔a5 f3 30 ♕b2+ ♔g3 31 ♕e5+ ♕f4 32 ♕g7+ ♕g4 33 ♕c3 ♔g2 34 ♕c6 ♕f5+ 35 ♔a6 ♔h3 36 ♕c3 ♕g6+ 37 ♔a7 ♔g2 38 ♕d2+ f2 39 ♕d5+ ♔g1 40 ♕d4 ♕g3 41 ♔a6 ♔h2 42 ♕d2 ♕g6+ 43 ♔a7 ♕f6 44 ♔b8 *(D)*



44...♔g1?!

44...♕e5+ 45 ♔b7 ♔g1 would have decided the game at once.

45 ♕e3 ♔g2 46 ♕e4+ ♕f3 47 ♕c2 ♔h1 48 ♕h7+ ♔g1 49 ♕g7+ ♕g2 50 ♕d4 ♕g3+?!

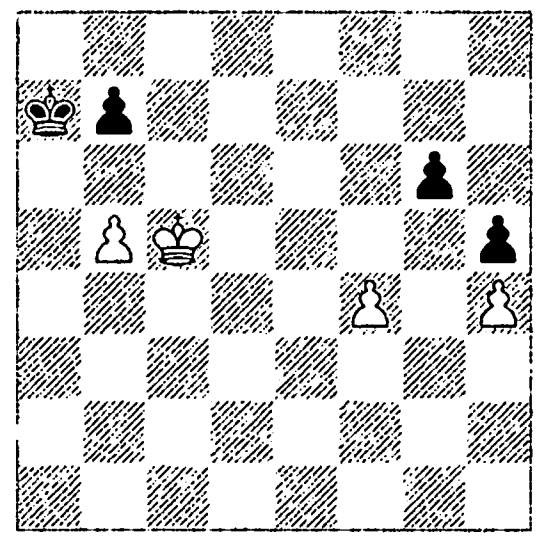
50...♔h1 wins immediately, as Black can interpose with check on h2.

51 ♔a7 ♔h2 52 ♕d2 ♔h1 53 ♕d5+ ♔g1 54 ♕d4 ♕g5 55 ♔a6 ♕g6+ 56 ♔a7 ♕f5 57 ♕e3?!

Black is no closer to the win here than at move 38, and White could still have resisted by 57 ♕g7+. The move played loses at once.

57...♔g2 58 ♕d2 ♕c5+ 59 ♔a6 ♔g1 0-1

It is important to note that even theoretically drawn endings of ♕+♙ vs ♕ are tough to defend in practice, and in over-the-board play many drawn positions are eventually lost. It's easy to make a little slip every now and again, allowing the attacker to make more and more progress with his pawn, until eventually the position slips over the border between drawn and lost. In the following position White could have won without allowing a queen ending, but it all ended happily for him (although much later!) when Black failed to hold a drawn position.



Barczay – I. Farago
Hungarian Ch. Budapest 1970

There's only one move to win, but in the game White didn't find it. The key idea is to return to this position with Black to move. Then Black will have to retreat his king, which gives White an extra tempo when he runs with his king to the kingside. In order to lose a tempo, White must triangulate with his king. This position is unusual in that the attacker can usually play his king round the triangle in either direction, but here only one way leads to success.

1 ♔d6?

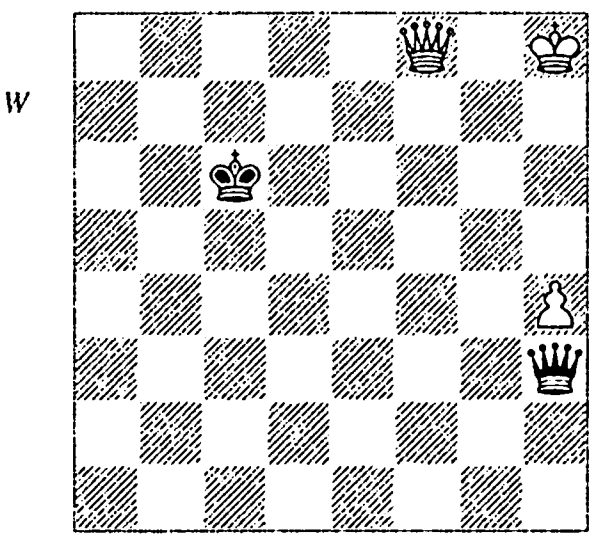
1 ♔c4! (1 ♔b4?? ♔b6 2 ♔c4 doesn't work due to 2...♔a5 and Black actually wins) was the winning move: 1...♔b6 (1...♔b8 2 ♔d5 also

gives White an extra tempo) 2 ♔b4 ♔c7 (after 2...♔a7 3 ♔c5 White has reached his target and wins after 3...♔b8 4 ♔d6) 3 ♔c5 ♔d7 4 ♔d5 ♔e7 5 ♔e5 b6 6 f5! gxf5 7 ♔xf5 ♔f7 8 ♔g5 and Black is lost.

1...♔b6 2 ♔e6 ♔xb5 3 ♔f6 ♔c6

We shall soon reach a position with ♕+♙ vs ♕, and Black needs to decide where his king will be best posted. At this stage it doesn't really matter where Black moves his king, as the position is drawn in any case, but as a matter of principle it is safer to head immediately for the a1-corner with the king, since this offers the fewest winning chances to the attacker. Therefore 3...♔c4 or 3...♔a4 would be more logical (note that Black promotes with check, so there is no chance of White forcing the exchange of queens after both sides promote).

4 ♔xg6 b5 5 f5 b4 6 f6 b3 7 f7 b2 8 f8♕ b1♕+ 9 ♔xh5 ♕d1+ 10 ♔h6 ♕d2+ 11 ♔g7 ♕g2+ 12 ♔h8 ♕h3 *(D)*



For the moment Black is not really under pressure to start moving his king towards a1, but if he wastes time then he could soon be on the verge of defeat.

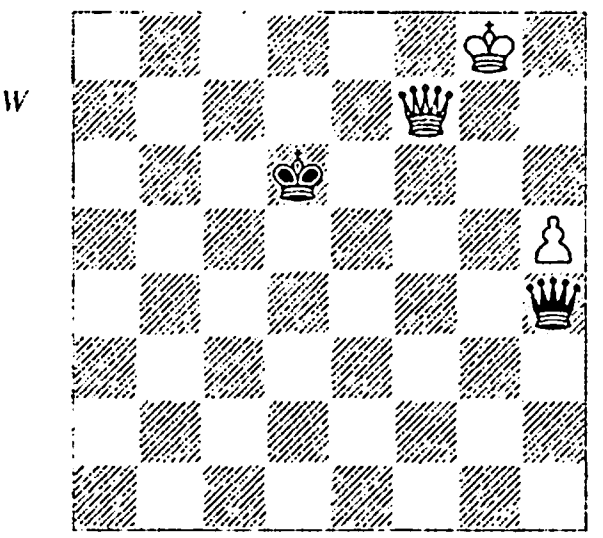
13 ♕e8+ ♔d6?!

Not yet losing, but a step in the wrong direction. 13...♔c5 is much better.

14 h5 ♕c3+?!

Giving pointless checks is a common reason for the loss of drawn ♕+♙ vs ♕ endings (see Section 7.8 on page 313). It is far more important to get your king in the right position than to give a sequence of checks which, thanks to an inferior king position, come to an end sooner or later. 14...♔c5 was still correct.

15 ♔g8 ♕c4+ 16 ♕f7 ♕h4! *(D)*



The fact that this is the only move to draw is a sure sign that things have reached a critical stage.

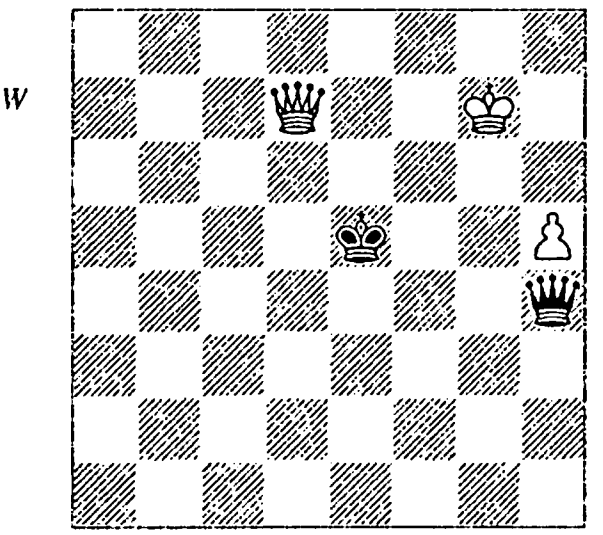
17 ♔g7 ♔e5?

This was the last chance to head for the a1-corner with 17...♔c5!, which by now is the only drawing move. However, although the position is now winning for White, this does not mean that the win is easy; indeed, great precision is required.

18 ♕e8+!

The only move to win.

18...♔f5 19 ♕d7+ ♔e5 *(D)*



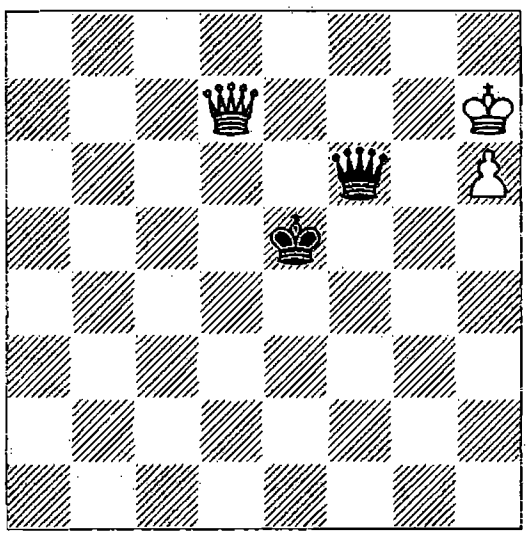
20 h6?

Pushing the pawn here is a mistake as White's queen is not sufficiently centralized. He should

have continued 20 ♕b5+ ♔e6 21 ♕c6+ ♔e5 22 ♕c5+ ♔e6 23 ♕e3+! ♔d5 and only now 24 h6. Then 24...♕g4+?! is wrong as 25 ♔f6 stops the checks straight away. Instead Black should play 24...♔c4!, when White still has a tough job to win.

20...♕f6+ 21 ♔h7 *(D)*

B



21...♕h4?

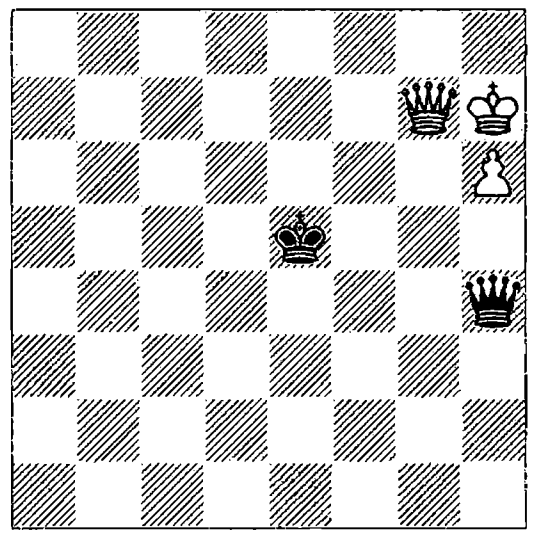
Once again the half-point is handed away. It might seem that the players are not producing very accurate chess, especially as this was in the days of adjournments, but such positions are tougher than they look. ♕+♙ vs ♕ endings which are near the draw/win boundary are very hard to understand, with the result being determined by very obscure points. This game is an example of a typical scenario in ♕+♙ vs ♕ in that initially the position is clearly drawn, and if the defender chooses the correct plan then he can draw without undue difficulty. However, the defender plays inaccurately and then the game nears the 'boundary layer' between draw and win. In this phase, the half-point often passes back and forth a number of times, the reasons for these reversals being hard to understand even with a database. Further inaccuracies by the defender (for it is much harder to defend than to attack in such positions) then cause the position to move out of the 'boundary layer' into the realm of clearly winning positions, and the attacker duly wraps the game up, although not without inaccuracies.

In this position, Black has four possible drawing moves, and of these 21...♔e4 appears most logical to me, moving the king to a less dangerous square (if you are curious, the other drawing moves are 21...♕a6, 21...♕b6 and 21...♕f3 – don't ask me why these work and no others!).

22 ♕g7+? *(D)*

Quite wrong as the queen doesn't control many important squares from g7. White should have transferred his queen to f3 and then played ♔g6, when Black has no checks: 22 ♕b5+ ♔f6 23 ♕b6+ ♔f5 24 ♕c5+ ♔f6 25 ♕c3+ ♔e6 (25...♔f5 26 ♕f3+ ♔e6 27 ♔g6) 26 ♕e3+ ♔f6 27 ♕f3+ ♔e7 28 ♔g6 and the win is getting closer.

B



22...♔e6!

Correct. It's too late to head for the a1-corner now; for example, 22...♔d5 23 ♕d7+ ♔c5 24 ♕f5+ ♔b4 25 ♔g6 with a winning position, although it's still very complicated. There are drawing positions with the black king near the enemy pawn, but there are also many possibilities to go wrong in such situations.

23 ♔h8?!

Pushing the pawn to h7 doesn't offer many winning chances, as there are too many perpetual check possibilities. 23 ♕g6+ ♔e7! (the only move) 24 ♕f5 was a better practical try

23...♕h5 24 h7 ♕h1?!

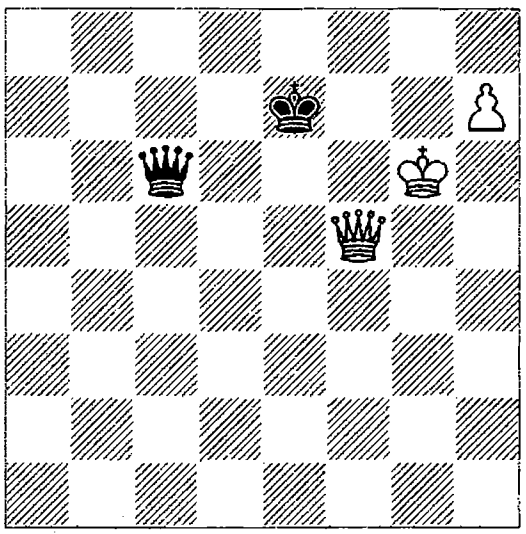
Making things harder for himself. After 24...♕e8+ 25 ♕g8+ ♕f7 White has no winning chances at all.

25 ♕g6+ ♔e7! 26 ♕g5+ ♔f7 27 ♕f5+ ♔e7 28 ♕e5+ ♔f7 29 ♕f5+ ♔e7 30 ♔g7 ♕g2+ 31 ♔h6 ♕h1+?

The wrong check, after which Black falls into a losing position again. 31...♕h2+! 32 ♔g6 ♕d6+! 33 ♔g5 ♕g3+! 34 ♕g4 ♕e5+! 35 ♔h6 ♕f6+! 36 ♔h5 ♕f7+! 37 ♕g6 ♕f3+! 38 ♔h6 ♕h3+ would still have drawn, although this involves a long sequence of 'only' moves so it would not have been so easy to find.

32 ♔g6 ♕c6+ *(D)*

W



33 ♔g7?

33 ♔g5! wins as after 33...♕g2+ we transpose into the game at move 35.

33...♕g2+ 34 ♔h6 ♕h1+? 35 ♔g5!

White hits on the correct plan second time round.

35...♕g2+ 36 ♕g4 ♕d5+ 37 ♔h6

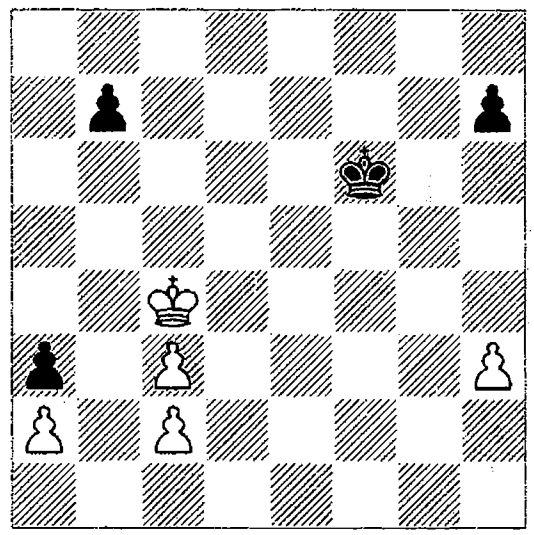
Black's queen is out of position and cannot give the saving check on f6. As a result the checks soon come to an end.

37...♕h1+ 38 ♔g6 ♕b1+ 39 ♕f5 ♕b6+ 40 ♔h5 ♕b2 41 ♕c5+ ♔f7 42 ♕c7+ 1-0

42...♔e6 43 ♕c8+ ♔f7 44 h8♕ ♕e5+!? is a good try, but fails to 45 ♔g4 ♕e4+ 46 ♔g5 ♕e3+ 47 ♔f5 ♕f3+ 48 ♔e5 and the king eventually hides on b8.

The difficulties of playing ♕+♙ vs ♕ tend to weigh more heavily on the defender than the attacker, and so it more often happens that drawn positions are lost than the other way round. However, occasionally the defender can take advantage of an inaccuracy to save a lost ending. The following position features interesting play in both the pawn ending and the subsequent queen ending.

B



J. Polgar – Istratescu
Dresden Olympiad 2008

This position is more complex than it appears. At first sight it is just a race in which White's king heads for b7 and Black's for h3, but there is much more to it than that. White has the advantage as she will be a pawn up in any subsequent queen ending, but it is not sufficient to win.

1...h5

Gaining space on the kingside is important if play develops into a race which results in Black creating a passed h-pawn.

2 ♔b5

If White doesn't aim for b7, Black wins by ...♔g5-h4.

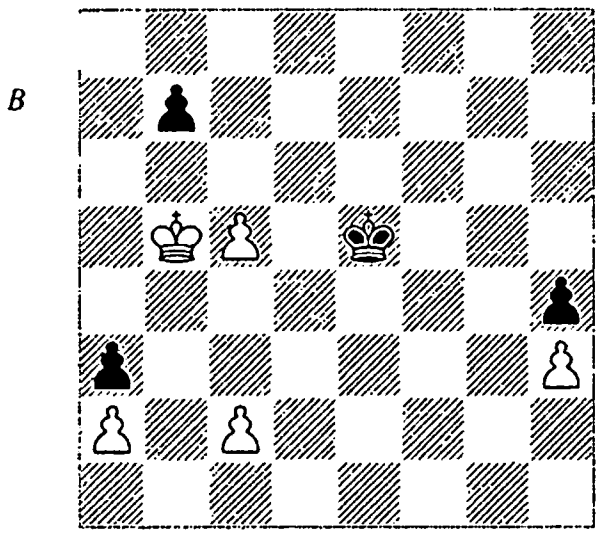
2...♔e5?!

This gives White an extra option which could have been avoided by 2...h4! 3 ♔b6 (3 c4 ♔e5 transposes to the game) 3...♔e5 4 c4 (4 ♔xb7 ♔d5 5 ♔b6 ♔c4 6 ♔c6 ♔xc3 7 ♔d5 is also a draw) 4...♔d4 5 c5 ♔d5 6 ♔b5 ♔e4!, transposing into the note to Black's 4th move, thus avoiding the possibility mentioned in the following note.

3 c4

The alternative was 3 h4!, preventing Black from gaining further space on the kingside. After 3...♔f4 4 c4 ♔g4 5 ♔b6 ♔xh4 6 c5 ♔g5 7 ♔xb7 h4 8 c6 h3 9 c7 h2 10 c8♕ h1♕+ 11 ♔a6 ♕d5 (11...♕f1+? 12 ♔a5 only helps White by driving her king towards the weak a3-pawn) 12 c4 ♕d3 White is a pawn up in the queen ending, but in view of the weakness of the a2-pawn Black has good drawing chances.

3...h4 4 c5 *(D)*



4...♔d4?

This is a more serious error which gives White a winning position. The correct defence is the surprising 4...♔e4!, which gives the king additional flexibility in that it can move to the queenside or make a run for the h3-pawn, depending on White's reply. Thus 5 ♔b4 ♔f3 6 ♔xa3 ♔g3 leaves Black a tempo ahead of the game, while 5 ♔b6 can be met by 5...♔d5. This idea is related to the Réti manoeuvre, but there is a difference because there is no threat involved; indeed, if Black were to move again after 4...♔e4!, the only drawing moves would be ...♔e3 and ...♔e5.

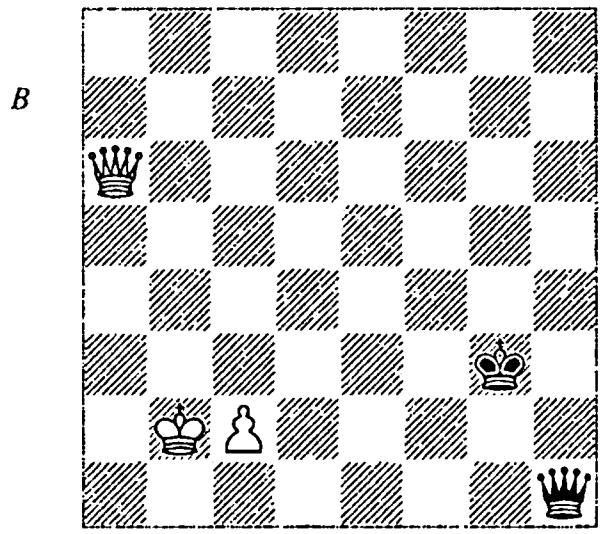
5 ♔b4 ♔e3

After 5...♔d5?! 6 ♔xa3 ♔xc5 7 ♔b3 White wins with her extra pawn.

6 ♔xa3 ♔f4 7 ♔b2! ♔g3 8 a4 ♔xh3 9 a5 ♔g3 10 a6

Not 10 c6? bxc6 11 a6 h3 12 a7 h2 13 a8♕ h1♕ and the c6-pawn is defended.

10...bxa6 11 c6 h3 12 c7 h2 13 c8♕ h1♕ 14 ♕xa6 *(D)*



Even without consulting the tablebases, we can see that this ending is very promising for White. She has a c-pawn, the most favourable pawn to have in an ending of ♕+♙ vs ♕. Recall that with ♕+c♙ vs ♕, the only drawing chance is for the defender to get his king close to the pawn, since there is no drawing zone in a distant corner. Black's king is relatively far away, so this position is a win even though the pawn is only on the second rank. It's 66 moves to mate, which puts it in the medium to hard difficulty level.

14...♕h8+ 15 c3?!

This lengthens the win somewhat. It would have been better to improve the position of the white king first by 15 ♔b3 ♕b8+ 16 ♔a4 ♕e8+ 17 ♕b5 ♕a8+ 18 ♔b4 ♕f8+ 19 ♔b3 ♕f7+ 20 c4, although even here it still takes 59 moves to mate.

15...♕b8+ 16 ♔c2 ♔f4

It's a good plan to bring the king back as far as possible, which gives Black more drawing chances if White does make a slip.

17 ♕f6+ ♔e4 18 ♕e6+ ♔f4 19 ♕d5?!

An unnecessary finesse which makes the win considerably harder. The queen is already well-placed, preventing the further approach of the enemy king, so now was the time for 19 c4!. After 19...♕e5 20 ♕c6 ♕e2+ 21 ♔b3 ♕d3+ 22 ♔b4 ♕d2+ 23 ♔b5 ♕b2+ 24 ♔a6 ♕a3+ 25 ♔b7 ♕b4+ 26 ♕b5 ♕e7+ 27 ♔a6 ♕d6+ 28 ♕b6 ♕a3+ 29 ♔b7 ♕f3+ 30 ♔c7 the checks stop and White can advance the pawn further.

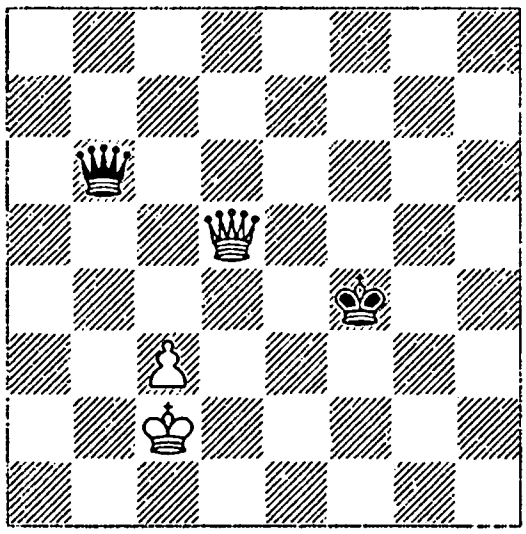
19...♕b6 *(D)*

20 c4?

This should throw away the win entirely, as it allows Black's queen to take up an active position preventing the advance of the white king. 20 ♔d3! was correct, and the checks eventually stop; for example, 20...♕b1+ 21 ♔d4 ♕b6+ 22 ♕c5 ♕d8+ 23 ♔c4 ♕b8 24 ♔d5 ♕a8+ 25 ♔d6 ♕f8+ 26 ♔c6 ♕c8+ 27 ♔b6 ♕b8+ 28 ♔a5 ♕a8+ 29 ♔b4 ♕b7+ 30 ♔a3 ♕a8+ 31 ♔b3 and now the pawn can advance.

20...♕e3?

W



Missing the drawing opportunity 20...♕b4! 21 c5 (21 ♔d3 ♕a3+ draws as advancing to d4 allows mate in one) 21...♕a4+! 22 ♕b3 (after 22 ♔c3 ♕a3+ 23 ♔d4 ♕a1+ White cannot escape the checks) 22...♕d4 23 ♕c3 ♕a4+ 24 ♔d3 ♕e4+ 25 ♔d2 ♕d5+ and White cannot win as her pawn is weak and so she cannot easily interpose her queen.

21 ♕d6+?

This allows Black to get his king back in front of the pawn. There was no reason to delay advancing the pawn and White could have won by 21 c5!; for example, 21...♕e2+ 22 ♔c3 ♕e1+ 23 ♔c4 ♕c1+ 24 ♔b5 ♕b1+ 25 ♔a6 ♕a1+ 26 ♔b6 ♕b1+ 27 ♔c7 ♕h7+ 28 ♕d7 and the checks dry up.

21...♔f5 22 c5 ♕e6

The pawn has become disconnected from White's king and so Black can offer the exchange of queens.

23 ♕d3+ ♔f6 24 ♔c3 ♔e7

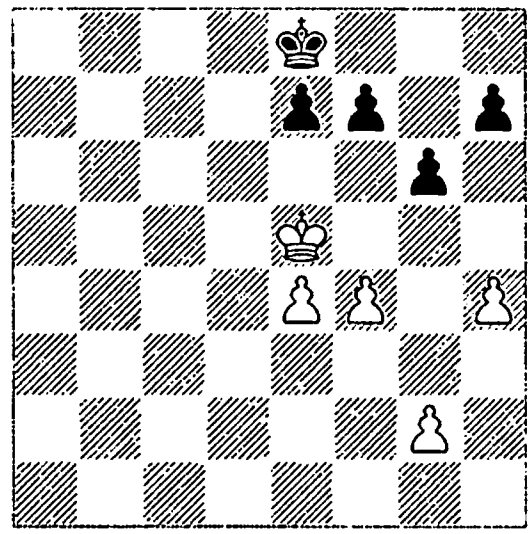
Now the draw is simple.

25 ♔b4 ♕d7 26 ♕g3 ♕b7+ 27 ♔c3 ♔d7 28 ♕d6+ ♔c8 29 c6 ♕b3+ 30 ♔xb3 ½-½

Stalemate.

We end this section with a mammoth struggle between two leading grandmasters. After a slip in the pawn ending, Black finds himself defending ♕+♙ vs ♕. The subsequent play shows that even very strong players may be ignorant of the general principles governing this ending. The half-point is handed back and forth a number of times before Gelfand eventually emerges victorious.

B



Gelfand – Jobava

Dortmund 2006

Material is equal and all the pawns are on one side of the board, so although White's king is more active, it is hard to imagine the result being anything other than a draw. Black can indeed hold the position by accurate play, but it only takes one error to turn it from a draw to a loss.

1...h5?

This mistake proves costly. Playing ...h5 is wrong for two reasons. Firstly, the priority should have been to expel White's king from its active position by ...f6+, and this could have been prepared by ...♔d7, which prevents the king from advancing to e6. Secondly, advancing the h-pawn actually weakens Black's pawn-structure, especially the g6-pawn.

1...♔d7! was the simplest way to reach a draw: 2 g4 f6+ 3 ♔d5 e6+ 4 ♔c5 h6 (4...f5 5 gxf5 gxf5 6 exf5 exf5 7 ♔d5 ♔e7 8 ♔e5 ♔f7 9 ♔xf5 ♔e7! is also drawn) 5 g5 (5 h5 gxh5 6 gxh5 ♔c7 and 5 e5 fxe5 6 fxe5 ♔c7 are drawn because Black can maintain the opposition) 5...hxg5 6 hxg5 (6 fxg5 f5! 7 exf5 exf5 is also a draw) 6...e5! and Black's problems are over.

2 f5!

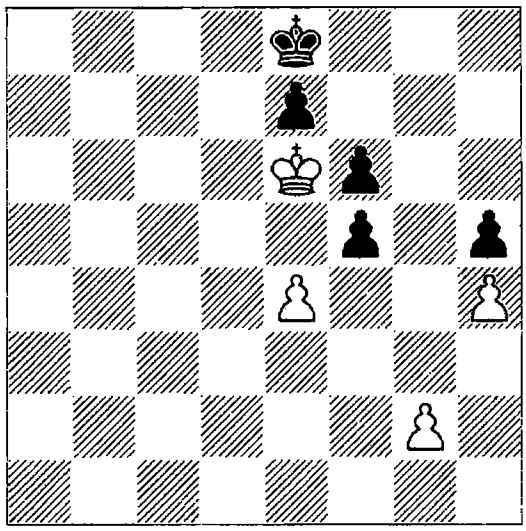
Threatening to win by fxg6 followed by ♔e6, so Black must take action.

2...f6+

The only chance, since after 2...♔d7 3 fxg6 fxg6 4 ♔d5 e6+ (4...♔d8 5 ♔e6 ♔e8 6 e5 also wins for White) 5 ♔c5 ♔c7 6 e5 White gains the opposition and wins, while 2...gxf5 3 ♔xf5 ♔d7 4 ♔g5 ♔e6 5 ♔xh5 ♔e5 6 ♔g5 gives White an unstoppable passed h-pawn.

3 ♔e6 gxf5 *(D)*

3...g5 loses to 4 hxg5! (4 e5? fxe5 5 ♔xe5 gxh4 6 ♔f4 ♔f7 7 ♔g5 h3 8 gxh3 e6 is only a draw) 4...fxg5 5 e5! g4 (5...h4 6 ♔d5 ♔f7 7 ♔e4 e6 8 f6 ♔g6 9 ♔f3 ♔f7 10 ♔g4 ♔g6 11 f7 and White wins in a similar way) 6 ♔d5 ♔f7 (6...e6+ 7 ♔xe6 h4 8 f6 h3 9 f7+ ♔f8 10 ♔f6 leads to mate) 7 ♔e4 e6 8 f6 ♔g6 9 ♔f4 ♔h6 10 f7 ♔g7 11 ♔g5 ♔xf7 12 ♔xh5 and White's extra pawn will be decisive.



4 e5!

Perhaps Black had overlooked this surprising possibility. Other moves only lead to a draw; for example, 4 exf5? ♔f8 5 ♔d7 ♔f7 or 4 ♔xf5? ♔f7 5 e5 e6+ 6 ♔f4 ♔g6.

4...fxe5 5 ♔xe5

5 ♔xf5? ♔f7 6 ♔g5 e4 is an immediate draw.

5...♔d7

The only chance, activating his king so as to set the e-pawn in motion.

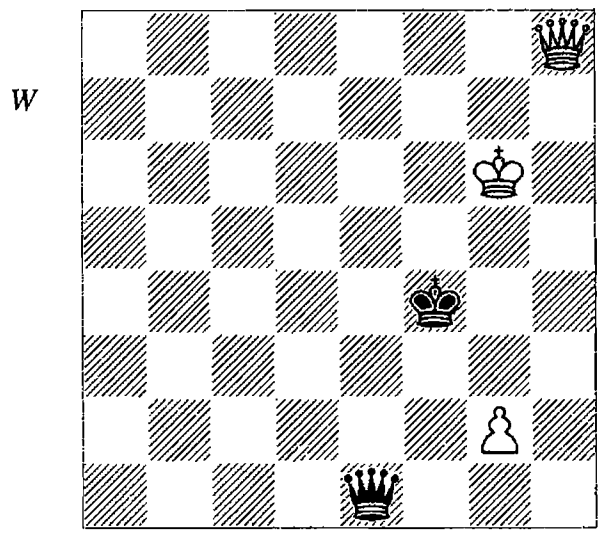
6 ♔xf5 ♔d6 7 ♔g5 ♔e5 8 ♔xh5 ♔f4

Now the white king cannot return to stop the e-pawn, so White has to concentrate on promoting the h-pawn. The result is a ♕+♙ vs ♕ ending that is winning for White, but which requires extremely precise play.

9 ♔g6

There are far more winning chances with a g-pawn than with an h-pawn, so it is not surprising that 9 g4? e5 10 g5 e4 11 g6 e3 12 g7 e2 13 g8♕ e1♕ is a draw. 9 g3+? sets the trap 9...♔xg3? 10 ♔g5 and White wins Black's queen with a skewer after both sides promote, but 9...♔f3! draws.

9...e5 10 h5 e4 11 h6 e3 12 h7 e2 13 h8♕ e1♕ *(D)*



The 'length to mate' in such endings is often a good indicator as to how hard they are to win in practice. Here White can force mate in 59 moves with precise play, which places it in the upper half of the difficulty range, although still far from the top. In order to reach a draw, Black must achieve one of the following aims:

1) If Black's king can get in front of the enemy pawn, then the result is almost always a draw.

2) If Black can directly attack White's pawn with his king, then he may be able to draw. In this position, Black's king is quite close to the g-pawn, so it looks as if this might be possible. However, White, by an accurate sequence of checks, manages to force Black's king away from the pawn so that a direct attack is out of the question.

3) If Black can't achieve either of the first two aims, his best chance is to keep his king in the a1-corner. This gives good drawing chances even if the pawn is far advanced.

14 ♕b8+!

The only move. 14 ♕h6+? is wrong as after 14...♔e4 Black's king can head for the a1-corner more quickly.

14...♔g4

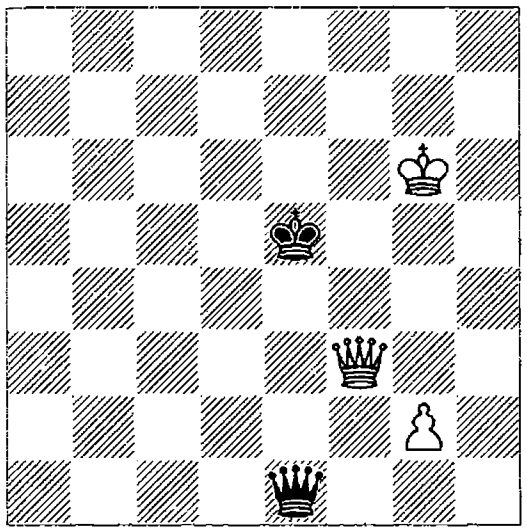
Forced, as otherwise White can exchange queens at once.

15 ♕c8+! ♔g3 16 ♕h3+ ♔f4 17 ♕f5+

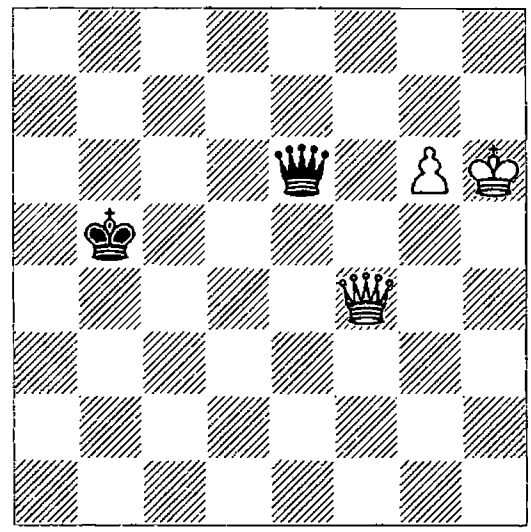
First White repeats moves.

17...♔g3 18 ♕h3+ ♔f4 19 ♕f3+ ♔e5 *(D)*

W



W



Now that the enemy king has been cut off from the pawn, White can push the pawn. With White's queen controlling the f-file, it seems unlikely that Black can achieve either of the first two aims given above, so his best chance will be to head for the a1-corner. Reaching this corner will be no easy matter as White's well-placed queen also controls the third rank.

20 g4! ♔d4 21 g5

The pawn has reached g5, and Black's king is still in the centre of the board. His only chance is to start checking and hope that White will be forced to interpose his queen to stop the checks, after which Black's king may be able to reach a1.

21...♕e8+ 22 ♔g7 ♕e7+ 23 ♔h6 ♔c4 24 ♕f4+

The most accurate move. 24 g6 also wins, but after 24...♕h4+ 25 ♔g7 ♔b4! Black is able to put up more of a fight.

24...♔b5?!

Heading the wrong way. 24...♔b3 offers tougher resistance.

25 g6 ♕e6 *(D)*

White is now close to victory, but it's still easy to go wrong, and indeed within a few moves Gelfand has allowed Black to reach a drawn position.

26 ♔g5?!

Starting to wander off the correct path. 26 ♕d4! was an effective move, centralizing the queen; after 26...♕h3+ 27 ♔g5 ♕g2+ 28 ♔f6 ♕c6+ 29 ♔f7 ♕b7+ 30 ♔f8 ♕f3+ 31 ♔e7 (White makes use of the interposition on d7 to prevent ...♕b7+) 31...♕a3+ 32 ♔d7 ♕h3+ 33 ♔d8 the checks are exhausted, whereupon the pawn can advance to the seventh rank.

26...♕e7+ 27 ♔g4 ♕g7 28 ♕d6?!

This doesn't yet throw the win away, but it betrays a lack of understanding of the position. Playing the queen to d6 carries no particular threat, and by giving up control of the fourth rank White allows Black's king to approach the a1-corner. 28 ♕f5+! would have been much stronger; after 28...♔b4 (28...♔b6 29 ♔g5 ♕c7 30 ♕f6+ ♔a7 31 g7 also wins for White) 29 ♕f7 Black has no viable check, so White can advance his pawn to the seventh rank. In this line, White allows Black to improve his king position slightly, but this is more than compensated for by the fact that White's pawn will be only one square from queening.

28...♔a4!

Black takes his chance to nudge his king towards a1.

29 ♔f5 ♕c3

29...♔b3?! is wrong, as after 30 ♕e5 there is no check on d7. Therefore Black activates his queen.

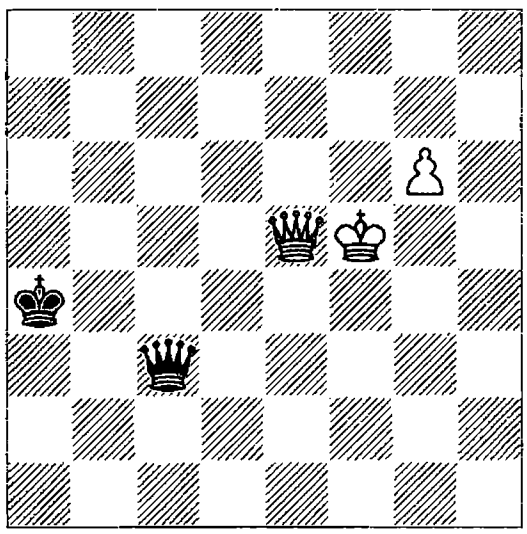
30 ♕e5?! *(D)*

30 ♔g4 is better – see the note to White's 35th move.

30...♕h3+ 31 ♔g5 ♕g2+ 32 ♔f5 ♕h3+ 33 ♔f6 ♕f3+ 34 ♕f5 ♕c3+ 35 ♔g5?

White has made things far more difficult for himself; indeed, at this point he is still 58 moves from victory so over the past 21 moves he has made only one move of progress. However, playing the king to g5 is a more serious mistake, throwing the win away entirely. The best

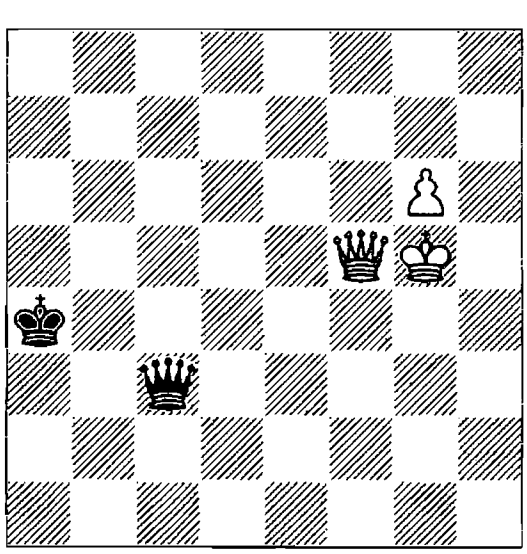
B



line was 35 ♕e5 ♕f3+ 36 ♔e6 ♕b3+ 37 ♕d5 ♕b6+ 38 ♕d6 ♕e3+ 39 ♔d5 ♕d3+ 40 ♔c5 ♕b5+ 41 ♔d4 ♕b2+ 42 ♔e3 ♕c1+ 43 ♔e4 ♕b1+ 44 ♔e5 ♕e1+ 45 ♔f5 ♕c3 (repeating the position at move 29 in the game!) 46 ♔g4! ♕g7 47 ♔g5 ♕c3 48 ♕d7+ ♔a3 49 g7 (the pawn advances, but this is still a tough win because Black's king is almost in the drawing zone; indeed, if Black's king were on a2 here then the position would be a draw) 49...♕e3+ 50 ♔g6 ♕g3+ 51 ♔f6 ♕h4+ 52 ♔e5 ♕g5+ 53 ♔d6 ♕f4+ 54 ♔d5 ♕f3+ 55 ♔c5 ♕c3+ 56 ♔b6 ♕e3+ 57 ♔b7 ♕b3+ 58 ♔a6 ♕g8 (58...♕c4+ 59 ♔a7 ♕c5+?! 60 ♔a8 stops the checks) 59 ♕d4 ♔a2 60 ♔b5 ♕e8+ 61 ♔b4 ♕e1+ 62 ♔c4 ♕e2+ 63 ♔d5 ♕b5+ 64 ♔e6 ♕e8+ 65 ♔f6 ♕c6+ 66 ♔e5 ♕e8+ 67 ♔f4 ♕f7+ 68 ♔g3 ♕g6+ 69 ♔h3 ♕h6+ 70 ♔g2 ♕g5+ 71 ♔f1 ♕b5+ 72 ♔e1 ♕e8+ 73 ♔d2 and there are no more checks.

We now return to 35 ♔g5? *(D)*:

B



35...♔a3!

Black appears to display more understanding of the position and at once takes the chance to improve his king position. The result should now be a draw.

36 ♕f8+ ♔a4?

But this is again a mistake, going the wrong way. After 36...♔a2 Black has improved his king position sufficiently to draw.

37 ♕a8+?

37 g7? ♕g3+ is also a draw because White's queen is passively placed. The only winning move is the surprising 37 ♔g4! and after 37...♕c2 38 ♕d6 the position is very similar to that after 46 ♔g4 in the note to White's 35th move.

37...♔b4?!

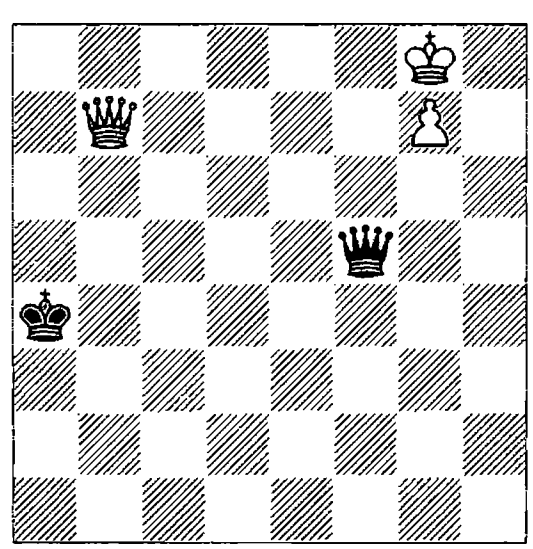
37...♔b3 is simpler.

38 ♕b7+ ♔a5?

This is quite wrong. We already know from general principles that the king should be heading for a1, and the tablebases confirm that 38...♔a3! is the only move to draw.

39 g7 ♕e5+ 40 ♔g6 ♕e6+ 41 ♔h7 ♕f5+ 42 ♔g8 ♔a4 *(D)*

W



Heading back in the correct direction, but if White continues accurately it would be too late.

43 ♕h1?

43 ♕a7+! is best; after 43...♔b4 (43...♔b3 44 ♕f7+) 44 ♕f7! ♕g4 45 ♕d5 (White centralizes his queen) 45...♔a3 (too late) 46 ♔f7 ♕f4+ 47 ♔g6 ♕g3+ 48 ♔f6 ♕c3+ 49 ♕e5 ♕f3+ 50 ♔e6 ♕b3+ 51 ♔d7 ♕b7+ 52 ♕c7 ♕b5+ 53 ♕c6 ♕f5+ 54 ♕e6 ♕b5+ 55 ♔e7

♕b7+ 56 ♔f6 ♕f3+ 57 ♔g5 ♕g3+ 58 ♕g4 ♕e5+ 59 ♔h4 ♕f6+ 60 ♕g5 ♕d4+ 61 ♔h3 ♕d7+ 62 ♕g4 and the pawn promotes.

43...♕c8+?

Black again misses the chance to draw by 43...♔b3 or 43...♔a3.

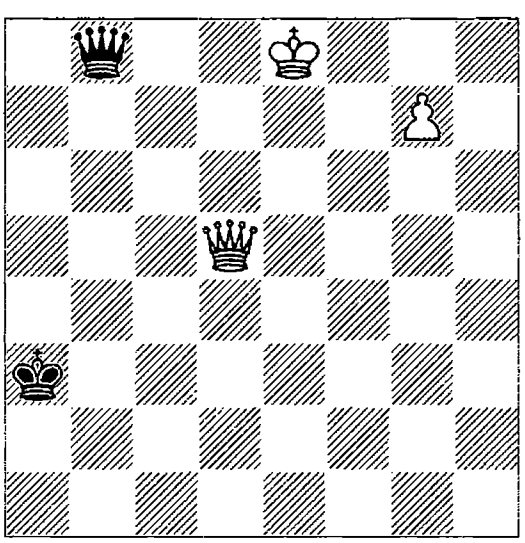
44 ♔h7 ♕f5+ 45 ♔h8 ♕e5 46 ♕h3!

A good move, cutting off Black's king from a1.

46...♕d4 47 ♕e6?!

Releasing the queen's control of the third rank. 47 ♕f3 is best, winning after 47...♕e5 48 ♕g4+ ♔a3 49 ♔h7 ♕c7 50 ♔g6 ♕d6+ 51 ♔h5 ♕h2+ 52 ♔g5 ♕d2+ 53 ♔h4 ♕d8+ 54 ♔h3 and the pawn promotes.

47...♕h4+ 48 ♔g8 ♕f4 49 ♕d5 ♔a3 50 ♔h7 ♕h4+ 51 ♔g6 ♕g3+ 52 ♔f7 ♕f4+ 53 ♔e8 ♕b8+ *(D)*



W

54 ♕d8?!

White hasn't made any progress over the past several moves, and now he sets the win back significantly. 54 ♔e7! ♕c7+ 55 ♔f6 ♕c3+ 56 ♕e5 is best, transposing into the note to White's 43rd move.

54...♕b5+ 55 ♕d7 ♕h5+?!

55...♕b8+ 56 ♔f7 ♕f4+ is much better, when White is still 43 moves from victory.

56 ♔f8

Now White finishes the game off efficiently.

56...♕f3+ 57 ♔e7 ♕e4+ 58 ♕e6 ♕b7+ 59 ♔f6 ♕f3+ 60 ♔g5! ♕g3+ 61 ♕g4 ♕e5+ 62 ♔h4! ♕f6+ 63 ♕g5 ♕d4+ 64 ♔h3 1-0

Summary:

- When only one side promotes, it is important to have a good knowledge of ♕ vs ♙ (on the seventh rank) positions, in particular how close the white king needs to be to win positions with ♕ vs f♙ and ♕ vs h♙.
- If White promotes and Black has a pawn on the seventh, most positions are winning if there are other white pawns on the board. However, there are exceptional drawn cases, for example if the queen is unable to drive the enemy king in front of the pawn because a vital square is inaccessible.
- If both sides promote, the ending can be decided quickly in favour of the attacker if there is an immediate tactical point such as mate, a skewer winning the enemy queen, or a forced queen exchange leading to a winning pawn ending. The defender is also not without tactical resources since he can sometimes save the game by perpetual check or stalemate.
- If you have the chance to reach a winning queen ending, think carefully before heading for it. Queen endings are tricky to play and can last a long time if the defender has many checks. It may be worth spending some time looking for an alternative win that does not involve a queen ending.
- One of the most awkward cases is when there is a possible liquidation to an ending of ♕+♙ vs ♕, since evaluating such positions is often difficult. Nevertheless, a good knowledge of the general principles governing such endings should permit a correct evaluation in the vast majority of cases.

3 Knight Endings

3.1 Introduction

The first section of this chapter, 3.2 (see this page), examines the case in which a lone knight faces some enemy pawns. Since this is covered in detail in many other endgame books (including *Understanding Chess Endgames*, Sections 19 and 20), we won't consider any of the basic positions, but shall instead look at a few more complicated practical examples.

The next few sections all deal with various situations in which only one side has a knight. These occur rather often in practice, but are frequently misplayed. Section 3.3 (page 144) is the most basic and looks at ♘+♙ vs ♙. Despite the limited material, these positions can be quite tricky as there are a number of positional draws which sometimes enable the defender to save the game. Section 3.4 (page 146) adds one more pawn and considers ♘+♙ vs 2♙. Reciprocals zugzwang occur frequently with this material, and Section 3.4.1 (page 147) examines some of the surprisingly subtle zugzwang ideas that can arise. Section 3.5 (page 152) deals with the general case in which only one side has a knight. In addition to the zugzwang ideas that appeared in the preceding section, in Section 3.5.1 (page 153) we encounter some subtle and deceptive knight manoeuvres. This section is quite detailed, since my examination of many over-the-board examples shows that such ideas are often overlooked. The short Section 3.5.2 (page 160) looks at some tactical ideas based on mate and stalemate.

When both sides have knights, the simplest case is that of ♘+♙ vs ♘, which is the subject of Section 3.6 (page 162). Once again, we focus on instructive practical examples which demonstrate not only some useful points, but also what is often missed. The ending ♘+2♙ vs ♘ is generally winning, but there are some drawn positions in which the pawns are weak or doubled, as described in Section 3.7 (page 166).

Knight endings have special characteristics which are reminiscent of pawn endings. For example, the short-range knight cannot play on both sides of the board at once, so if one player has an outside passed pawn, his opponent may need to dispatch his knight to blockade it. Then he will be effectively a knight down on the other side of the board. As a result, outside passed pawns are especially powerful in knight endings and we explore this subject in some detail in Section 3.8 (page 169). As we shall see in Section 3.9 (page 176), the attacker can sometimes sacrifice a knight in order to obtain irresistible passed pawns.

An advanced passed pawn will often win the enemy knight, but sometimes it is possible to achieve more by driving the enemy knight away from the promotion square, thus securing a whole queen. When you have such a passed pawn, a common error is to capitalize on it straight away rather than squeezing the greatest value out of it. Section 3.10 (page 180) explores some examples of this typical mistake. Finally, in Section 3.11 (page 182) we take a quick look at some tactical possibilities based on mate, stalemate or a breakthrough.

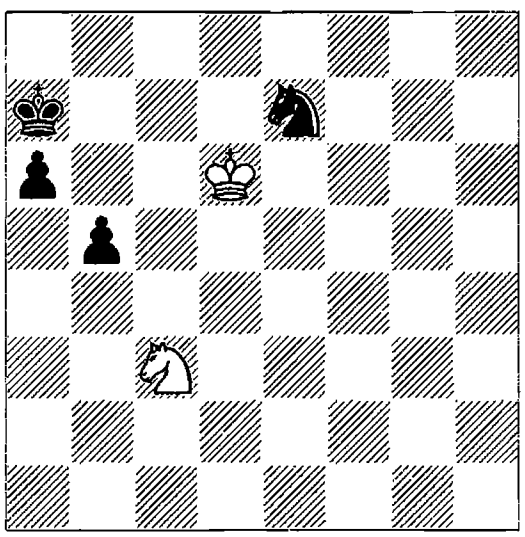
3.2 Knight vs Pawns

There are quite a few interesting positions with a knight against one pawn. I dealt with some of these in *Understanding Chess Endgames* and I won't repeat them here, but for practical purposes the most important point is to know that if a knight controls the queening square of a pawn, then the result is almost always a draw except if the pawn is a rook's pawn. For a rook's

pawn, say a white a-pawn, it is necessary for Black's knight to control a7 in order to draw. This reflects the fact that knights have particular difficulty when facing rook's pawns, because the knight can only operate from one side of the pawn. These results apply even if the defender's king is far away.

The first interesting case for practical play is that of knight vs two pawns. Most positions of this type are drawn, as the knight can halt one pawn while the king deals with the other. Problems start to arise if the defending king cannot move in front of the pawns, when the main burden falls on the knight.

B



Kasparov – Badalian
Tbilisi 1976

1...♔b6!

The only move to win, since if the knight moves, White draws by ♔c5 followed by taking on b5.

2 ♔xe7 ♔c5!

It is important to keep White's king at bay. 2...b4? only draws after 3 ♘e4! ♔b5 4 ♔d6 ♔c4 5 ♔c6 a5 6 ♘d6+ ♔b3 7 ♔b5 a4 8 ♘e4 a3 9 ♘c5+ ♔c3 10 ♔a4.

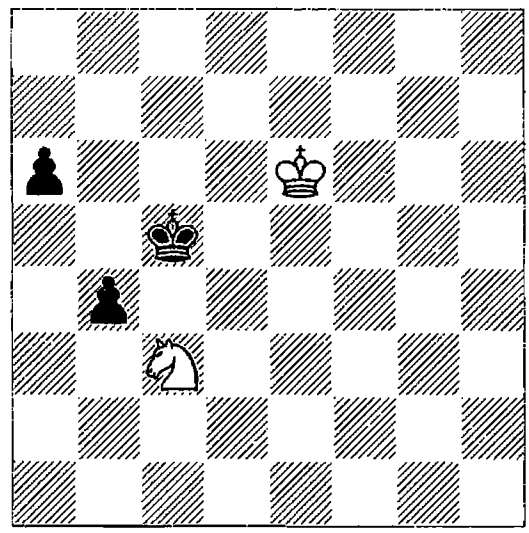
3 ♔e6

Or 3 ♘e4+ ♔d4 4 ♘d2 ♔d3 5 ♘b3 ♔c3 6 ♘c5 a5 7 ♔d6 a4 8 ♔c6 a3 and Black wins.

3...b4? *(D)*

3...a5! is the winning move; for example, 4 ♔e5 b4 5 ♘e4+ ♔c4 6 ♘d2+ ♔c3 7 ♘e4+ ♔d3 8 ♘c5+ ♔c4 9 ♔d6 b3 10 ♘a4 ♔b4 11 ♘b2 a4 and the pawns cannot be stopped.

W



Gufeld's claim in *Informator 22* that the diagram position is winning for Black is mistaken, because he missed a cunning drawing line for White, which was also overlooked by Kasparov during the game.

4 ♘a4+!

The only drawing move. 4 ♘d1? loses after 4...a5 5 ♘b2 ♔d4 6 ♔d6 ♔c3 7 ♘a4+ ♔b3 8 ♘c5+ ♔c4 9 ♘a4 ♔b5 10 ♘c5 a4 and the pawns roll forward.

4...♔c4

4...♔b5 5 ♘b2 a5 6 ♔d5 a4 7 ♘c4 (7 ♔d4? a3 wins for Black) 7...a3 8 ♘d2 ♔a4 9 ♔c4 a2 10 ♘b3 ♔a3 11 ♘a1 ♔b2 12 ♘b3 also leads to a draw.

5 ♔e5?

5 ♔d6! a5 was given as winning for Black by Gufeld, but this is just the point at which White has a surprising draw: 6 ♔c6 b3 7 ♘b6+! (7 ♔b6? loses to 7...♔b4 8 ♘c5 a4) 7...♔b4 (7...♔c3 8 ♔c5 draws) 8 ♘d5+ ♔a3 9 ♘e3! a4 10 ♔b5 b2 11 ♘c4+ ♔b3 12 ♘xb2 a3 13 ♘d3 and White is saved.

5...b3?

Missing his chance. Black could have won by 5...a5! 6 ♘b6+ (6 ♔e4 ♔b5 7 ♘b2 a4 8 ♔d3 a3) 6...♔b5! 7 ♘d5 ♔c5! 8 ♔e4 (or 8 ♘f4 a4 9 ♘d3+ ♔c4 10 ♘b2+ ♔b5 and Black wins) 8...a4! 9 ♘f4 a3 10 ♘d3+ ♔c4 and the pawns are too strong.

6 ♘b2+!

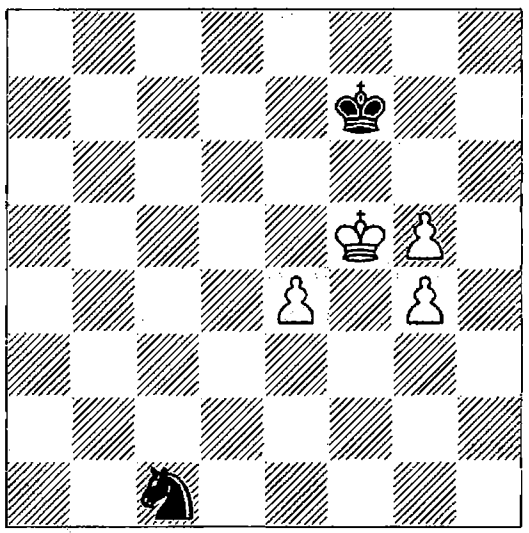
White must take care. 6 ♔e4? is wrong and loses after 6...a5! 7 ♔e3 ♔b4 8 ♘b2 ♔c3! (8...a4? 9 ♔d4! a3 10 ♘d3+ draws) 9 ♘a4+ ♔c2 10 ♔d4 b2 11 ♘c3 a4.

6...♔b4

6...♔c3 7 ♘a4+ ♔b4 8 ♘b2 is also a draw.

7 ♔d4 a5 8 ♘d3+ ½-½

The short-range knight struggles against three disconnected pawns and if the pawns are spread far apart the knight stands little chance, although if the pawns are relatively close together the knight can sometimes draw. In the following position, White's pawns include a pair of doubled pawns, which makes the defender's task simpler. However, even though the position is objectively drawn, it still requires some care to avoid defeat.



W

Bologan – Volkov
Moscow 2005

1 e5 ♘e2 2 e6+ ♔g7?!

When a defender loses a drawn endgame, there is always a point at which the game slips irrevocably into a loss. However, the seeds of the defeat are often sown earlier, when inaccurate defence turns a simple draw into one achievable only by very precise play. Here, for example, Black could have held the game without any problems by 2...♔e7 3 ♔e5 (or 3 g6 ♘d4+) 3...♘g1 4 g6 ♘f3+ 5 ♔f4 (5 ♔f5 ♘d4+) 5...♔xe6 6 ♔xf3 ♔f6.

3 ♔e5

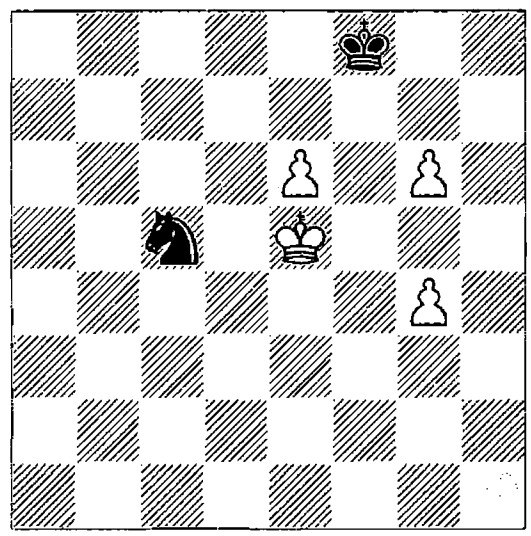
The position is still drawn, but Black has made his task more difficult.

3...♘c3 4 ♔d6 ♔f8 5 g6

The pawns have crept forward, and now Black must find some accurate moves to hang on.

5...♘e4+ 6 ♔e5 ♘c5? *(D)*

This should lose. 6...♘c3! is perhaps the simplest defence; for example, 7 g5 ♘e2 8 ♔f6 ♘f4 or 7 ♔d6 ♘e4+ 8 ♔d7 ♘c5+. However, 6...♘f2! is also adequate: 7 ♔f5 (7 g5 ♘g4+ 8 ♔d6 ♘e3!) 7...♘d3 8 ♔f6 ♘f4! 9 g7+ ♔g8 10 e7 ♘d5+! 11 ♔e6 ♘xe7 12 ♔xe7 ♔xg7 with a draw.



W

7 g5?

Throwing the win away. 7 ♔d5! is decisive as 7...♘b7 (7...♔e7 8 g7 and 7...♘d3 8 ♔d6 ♘f2 9 e7+ ♔e8 10 g7 ♘e4+ 11 ♔e5 force the g-pawn home) 8 ♔c6 ♘d8+ (8...♘a5+ 9 ♔d7 and White wins) 9 ♔d7 ♘xe6 10 ♔xe6 ♔g7 11 ♔f5 ♔h6 12 g7! ♔xg7 13 ♔g5 leads to a standard win.

7...♘b7

Black could even have drawn by 7...♘xe6 8 ♔xe6 ♔g7 9 ♔f5 ♔g8 10 ♔f6 ♔f8 11 g7+ ♔g8, when White must give up his g7-pawn to avoid stalemating Black.

8 ♔d5

Or 8 ♔f6 ♘d6 9 e7+ ♔g8 10 ♔e5 ♘e8 11 ♔e6 ♘g7+ 12 ♔d7 ♔h8 13 ♔d8 ♔g8 and White cannot make progress.

8...♘a5!

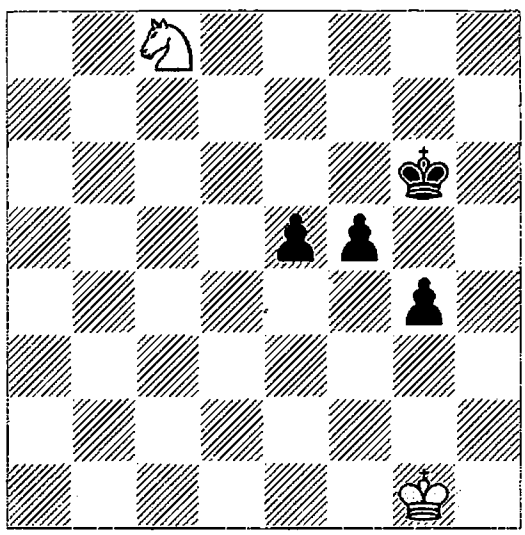
The only move.

9 ♔c5 ♘b3+ 10 ♔d5 ♘a5 11 ♔d6 ♘c4+ 12 ♔c7 ♘e3 13 ♔d8 ♘f5 14 ♔d7 ♔g7 ½-½

In the ending of knight vs three connected pawns, there is a general rule of thumb that the pawns usually win if they can all reach the fifth rank. However, there are many exceptions to

this rule and it is also worth bearing in mind that the knight has better chances when the pawns are nearer the centre of the board, because it can then operate from both sides of the pawns. The knight is at its worst when it has to face f-, g- and h-pawns (or the corresponding files on the queenside).

B



Skalkotas – T. Horvath
Athens 1983

According to the notes by T.Horvath in *Informator 36*, this endgame was winning for Black throughout the subsequent play. However, the true story is more complicated, as we shall see. In the diagram White cannot prevent Black from advancing all the pawns to the fifth, which suggests that the position should be a win, and this is backed up by the concrete analysis. However, the win is not so simple that Black cannot go wrong.

1...♔g5 2 ♔g2 e4 3 ♘e7

3 ♘d6 e3 doesn't help White, as he cannot prevent ...f4.

3...f4

Target achieved.

4 ♔f2 g3+

This is the quickest win, but it must be followed up correctly because otherwise the protruding pawn at g3 will make it hard for Black to advance any of his other pawns.

5 ♔g2 ♔h4?

A serious mistake giving White the chance to draw. Just at this moment Black had a relatively simple win by 5...♔g4! 6 ♘d5 e3 7 ♔f1 ♔f5! and White cannot move his king (as this would allow ...e2 or ...g2), while a knight move allows ...f3.

6 ♘f5+

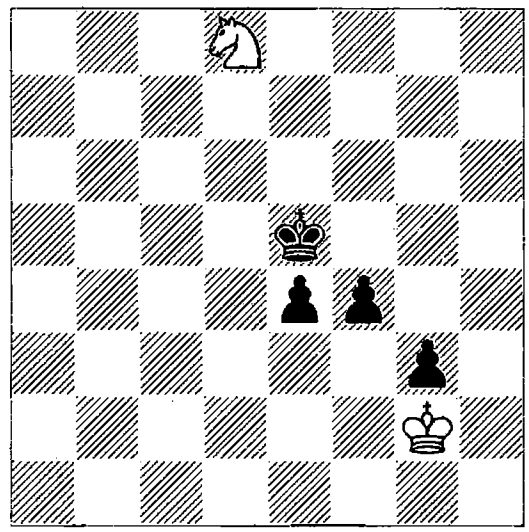
White even had a second drawing move in 6 ♘g6+; e.g., 6...♔g4 7 ♘e5+ ♔f5 8 ♘c4 ♔g5 9 ♘e5 and Black can never force through ...f3.

6...♔g4 7 ♘h6+! ♔g5 8 ♘f7+ ♔f6 9 ♘d8

9 ♘d6 ♔e5 10 ♘f7+ is another drawing line, transposing into the note to White's 10th move.

9...♔e5 *(D)*

W



10 ♘c6+?

The wrong check, handing the half-point back to Black. 10 ♘f7+! was the only move to draw; after 10...♔d4 11 ♘g5! ♔d3 (11...♔e3 12 ♘e6 and White wins a pawn as Black is in zugzwang) 12 ♘e6! ♔e3 the only drawing line is 13 ♔h3! ♔f3 (or else White wins a pawn) 14 ♘g5+ ♔e3 15 ♘e6! repeating the position.

10...♔d5?

The wrong way. 10...♔f5! was winning, since if the knight moves Black can play ...♔g4, while 11 ♔h3 loses to 11...e3 12 ♔g2 ♔e4! 13 ♘b4 e2 14 ♘c2 ♔d3 15 ♘e1+ ♔d2 16 ♘f3+ ♔d1 and the e-pawn promotes.

11 ♘e7+?

This final error hands the win back to Black and from this point on Horvath makes no mistake. The only way to draw was 11 ♘d8! ♔d4 12 ♘e6+ ♔e3 13 ♔h3, as in the note to White's 10th move.

11...♔d4

White's knight is too far away from e6 to meet ...♔e3 by ♘e6.

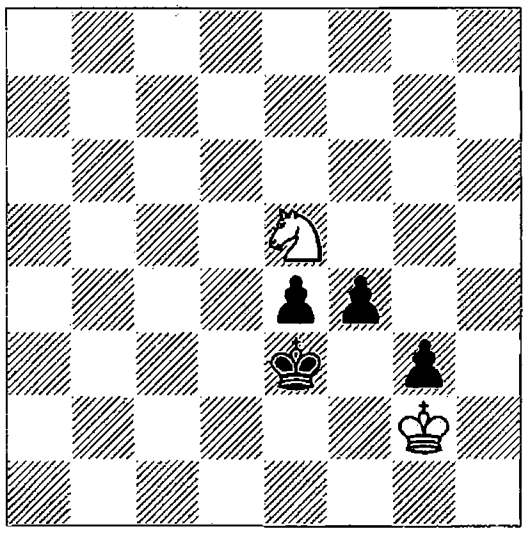
12 ♘g6 ♔e3

Black threatens to win by 13...f3+ 14 ♔xg3 f2 15 ♔g2 ♔e2 16 ♘f4+ ♔e1. Had the knight been on e6, then White could have checked on d4 rather than f4 and he would now have ♘c2+ available.

13 ♘e5 *(D)*

Or 13 ♘e7 f3+! 14 ♔xg3 ♔d2! (Black must not block the e-pawn; 14...♔e2? 15 ♘d5 f2 16 ♘f4+ is only a draw) 15 ♘d5 e3! and one of the pawns promotes.

B



13...♔d2!

The quickest win, threatening simply ...e3.

14 ♘g6 f3+! 15 ♔xg3 e3!

There is no defence.

16 ♘e5 f2 17 ♘f3+ ♔e2 0-1

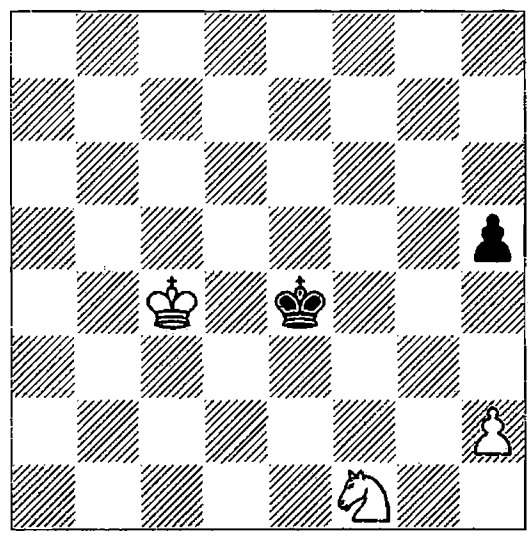
Summary

- Two pawns vs knight is generally a draw, but there can be difficulties for the defender if his king cannot get in front of the pawns. The knight has most trouble dealing with rook's pawns, so the winning chances are greater if the two pawns include a rook's pawn.
- Three connected passed pawns vs knight is a win if the pawns are far enough advanced, typically if all three pawns can reach the fifth rank. Again the knight has more trouble when the pawns are near the edge of the board.

3.3 Knight + Pawn vs Pawn

The ending of knight and pawn vs pawn is more complicated than one might expect, and mistakes in over-the-board play are not uncommon. The main difficulty is that there are a number of positional draws in which the attacker has everything defended but is unable to make progress.

W



Vainerman – Timoshchenko
Norilsk 1987

This position is a win, but a degree of caution is required in order to avoid a positional draw.

1 ♔c3 ♔f3

If Black pushes the h-pawn, White wins by allowing Black to take on h2 and then mating him in the corner: 1...h4 2 ♔d2 ♔f3 3 ♔e1 ♔g2 (3...h3 4 ♘g3 ♔g2 5 ♘e2 ♔xh2 6 ♔f1 ♔h1 7 ♔f2 ♔h2 8 ♘d4 ♔h1 9 ♘f5 ♔h2 10 ♘e3 ♔h1 11 ♘f1 also leads to mate) 4 ♔e2 h3 (4...♔h3 5 ♔f2 ♔g4 6 ♔g2 forces Black back and wins) 5 ♘e3+! ♔xh2 6 ♔f2 ♔h1 7 ♘f1 and mate next move.

2 ♔d2?

A mistake, as from here the white king doesn't have an easy path towards Black's pawn. 2 ♔d3! is correct (2 ♔d4! is also good), the main point being that after 2...♔f2 3 ♘e3, if Black chooses 3...♔g1, then White can win by 4 h4 ♔f2 5 ♔e4 ♔g3 6 ♘g2!, giving up the knight to win the h-pawn under favourable circumstances. Therefore Black must try 3...♔f3, but White wins all the same after 4 ♔d4 ♔f4 (4...h4 5 ♔d3! h3 6 ♘f1 ♔f2 7 ♘d2 ♔g2 8 ♔e2 ♔xh2 9 ♔f2 again leads to mate) 5 ♘f1! ♔f3 6 ♔e5 ♔g2 7 ♔f4 ♔xf1 8 h4 and again White wins. The two ideas of mating in the corner and

sacrificing the knight to win the enemy pawn are fundamental to many endgames of ♘+h♙ vs h♙.

2...♔f2 3 ♘e3

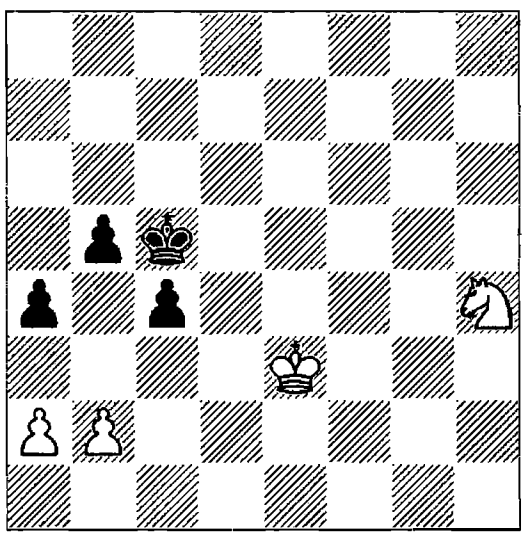
3 h4 is met by 3...♔f3 4 ♘e3 ♔g3 5 ♘f5+ ♔g4 and the pawn falls.

3...♔g1 4 h4 ½-½

After 4...♔f2! 5 ♔d3 (thanks to White's faulty second move, he is now not in a position to give up the knight) 5...♔g3 6 ♘f5+ ♔f4 7 ♘e7 ♔g4 8 ♘g6 ♔f5 Black forces a draw by repetition.

It is advisable to be aware of the general principles involved in knight and pawn vs pawn positions, since they are quite tricky and are often misplayed in practice. Many endings in which only one side has a knight eventually reduce to such an ending, as in the following example.

W



Kuligowski – Schinzel
Polish Ch, Lodz 1980

1 ♘f3

White's first priority is to retrieve his offside knight from the edge of the board.

1...♔b4

Threatening to draw by 2...a3 or 2...c3. The alternative 1...b4 2 ♘g5 c3 (2...♔d5 3 ♘e4 ♔e5 4 a3 c3 5 ♘xc3 and White wins) 3 bxc3 bxc3 4 ♔d3 ♔b4 5 ♘e4 is also winning for White.

2 ♘d4 c3

Or 2...♔c5 3 a3 b4 4 axb4+ ♔xb4 5 ♔d2 a3 6 ♘c2+ followed by bxa3.

3 a3+!

The only move to win. 3 bxc3+? ♔xc3 4 ♘xb5+ ♔b4 followed by ...♔a3 is a draw.

3...♔c4 4 bxc3 ♔xc3 5 ♘xb5+ ♔c4

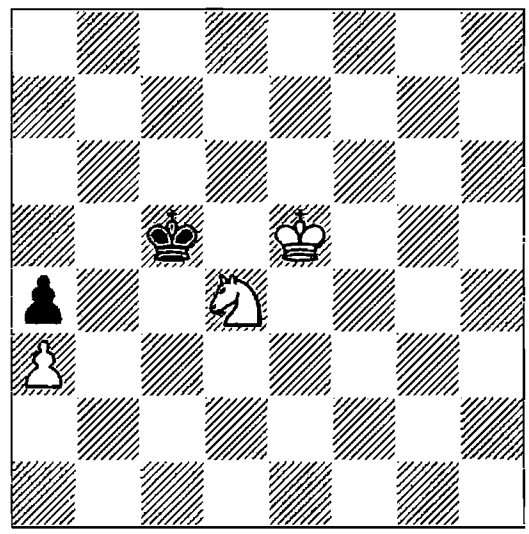
Now the position has been reduced to a knight and pawn vs pawn situation. White is winning, but it is not trivial – indeed, in the game the task proved too much for Kuligowski.

6 ♘d4 ♔c3 7 ♔e4 ♔c4

If it were Black to move, then the win would be much easier, as he would have to allow White's king to approach the pawn. White to play can still win, but he must be prepared to sacrifice his knight.

8 ♔e5 ♔c5 *(D)*

W



Black must keep the white king at bay. This is the crucial position, because forcing Black's king to c5 has drawn it further away from the white pawn, so now White has time to reposition his knight.

9 ♘e2?!

This doesn't yet throw away the win, but it does waste time. Kuligowski pointed out the correct line in *Informator 30*: 9 ♘f3! ♔c4 10 ♘d2+ ♔c3 11 ♘b1+! (if you haven't seen this idea before, it's possible to imagine overlooking it at the end of a long game; the black king has to go all the way to the eighth rank to capture the sacrificial knight, and this gives White a winning pawn ending) 11...♔b2 12 ♔d4 ♔xb1 13 ♔c3! and White wins.

9...♔c4 10 ♘c1?

Just losing the pawn. White could have still have won by backtracking with 10 ♘d4!.

10...♔c3 11 ♔d5 ♔b2 ½-½

Summary:

- ♘+♙ vs ♙ is usually a win, but there are some exceptional positional draws.
- Sacrificing the knight to reach a winning pawn ending is a common idea.
- If both sides have h-pawns (or a-pawns), and the defender's pawn is on the sixth rank, then it is sometimes possible for the attacker to give up his pawn and force a mate in the corner with just the king and knight.

3.4 Knight + Pawn vs Two Pawns

Matters become even more tricky when the defender has an additional pawn. In many positions, it is important to consider the plans for both sides in addition to the concrete variations.

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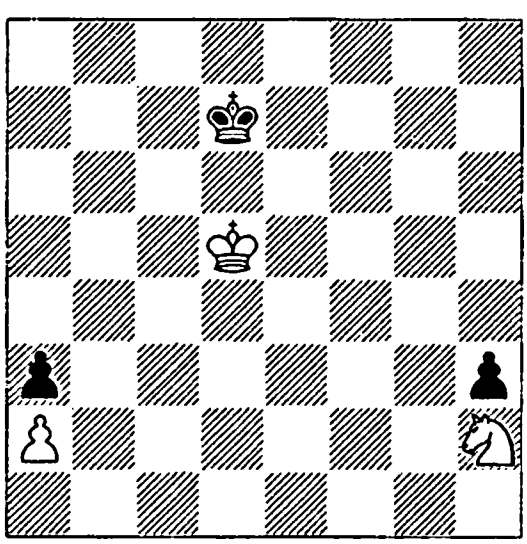


Vukić – I. Raičević
Niš 1993

In order to draw this position, Black has to establish his priorities. It's clear that there are two basic plans. He can either keep his king on the queenside, allowing White to take the a3-pawn with his king, or he can try to penetrate with his king on the kingside to support the h3-pawn. In the latter case, Black will allow White to take the a3-pawn, but hopes to reach g3 with his own king and thus force a repetition. This argument would seem to favour moving to the kingside, and that is what Black played in the game. However, a deeper examination shows that there is more to the position. Let's go back to the first plan and suppose that Black keeps his king on the queenside and that White takes the a3-pawn. Can White actually win? It's easy for White to push his pawn to a6, but what next? Answering this question depends on calculation (or knowledge) and we shall see in the analysis below that White cannot win. Thus Black need not fear White taking on a3 with his king.

The main danger for Black is that White will head for the h3-pawn with his king, while playing his knight to b1. This is the exchange of roles idea we saw in the Korensky-Suetin example from the Introduction. Black will then have to defend the a3-pawn with his king and can only wait while White takes on h3 and returns with the king. It is this plan that Black must thwart, and the best way to do so is to keep his king on the queenside, so that when White plays his king towards the h3-pawn, Black can rush up the board and prevent the knight from reaching b1.

1...♔e7?

Already the losing move. The correct line was 1...♔c7! 2 ♔c5 (after 2 ♘f1 ♔b6! 3 ♔e4 ♔c5 4 ♔f3 ♔c4 5 ♘d2+ ♔c3 Black is just in time to meet 6 ♘b1+ by 6...♔b2) 2...♔b7 3 ♔b4 ♔b6 4 ♔xa3 ♔a5 5 ♔b3 ♔b5 6 a4+ ♔a5 7 ♔a3 ♔a6 8 ♔b4 ♔b6 9 a5+ ♔a6 10 ♔a4 ♔a7 11 ♔b5 ♔b7 12 a6+ ♔a7 13 ♔a5 (the key moment; Black must choose the correct square for his king) 13...♔a8! (not 13...♔b8? 14 ♔b6 ♔a8 15 ♘f1 ♔b8 16 a7+ ♔a8 17 ♘e3 h2 18 ♘d5 h1♕ 19 ♘c7#) 14 ♔b6 ♔b8 15 ♘f1 ♔a8 16 ♘e3 h2 17 ♘d5 h1♕ 18 ♘c7+ ♔b8 19 a7+ ♔c8 and Black draws because his queen covers White's promotion square.

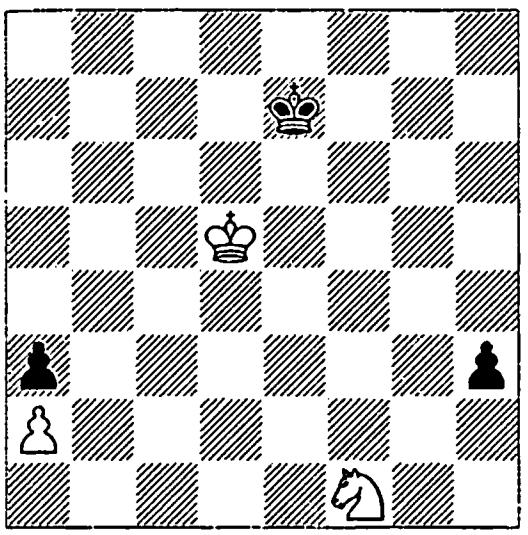
2 ♘f1! *(D)*

2 ♔e4? ♔d6 3 ♘f1 ♔c5! leads to a draw, while 2 ♘f3? ♔d7 3 ♔e4 ♔c6 is also wrong as the knight prevents White's king from entering the square of the h-pawn. The move played is correct because White brings the knight nearer b1 while keeping the way clear for the white king to move to e4 and f3.

2...♔f6

Or 2...♔d7 3 ♔e4 ♔c6 4 ♔f3 ♔c5 5 ♘d2 ♔d4 (5...♔b4 6 ♘b1 is also hopeless for Black)

B



6 ♘b1 ♔d3 7 ♘xa3 ♔c3 8 ♘b1+ and White wins.

3 ♔e4 ♔e6

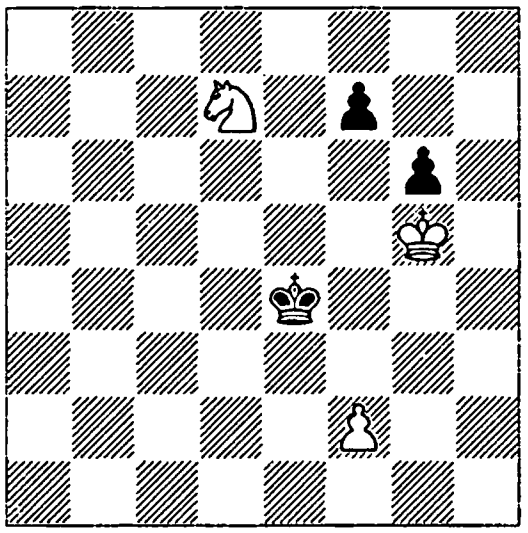
3...♔g5 4 ♔f3 ♔h4 5 ♔f4 is also winning for White.

4 ♔f3 ♔d5 5 ♘d2 1-0

White plays ♘b1 and wins.

The following position features an idea that occurs relatively often in knight endgames: sacrificing the knight.

W



Shishkov – Uzsoki
Hungary 1972

The quickest way for White to win is to sacrifice his knight.

1 f4!

1 ♔g4 also wins, but more slowly. However, in this case the slow but safe method might have been preferable since in the game White quickly went wrong.

1...♔e3

The best chance, because 1...♔d5 loses at once to 2 ♘e5 ♔e6 3 ♘xg6.

2 ♘f6?

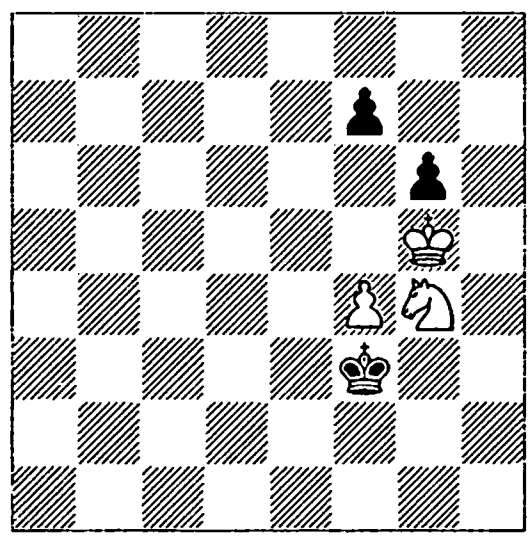
White could have won by 2 ♘e5! f6+ 3 ♔g4! g5 4 f5!. Although this line is not very deep, it is hard to see as it involves two consecutive sacrifices of the knight. In particular, there is a block against the idea of meeting ...f6+ with anything other than ♔xf6. After the move played, the position is a draw.

2...♔f3!

Black seizes his chance to reach a position of reciprocal zugzwang with White to play. The basic point is that Black keeps his king on f3 or g3, totally immobilizing the white king. White's knight is also extremely restricted, because if the knight moves away from control of f6, Black liquidates White's last pawn by playing ...f6+.

3 ♘g4 *(D)*

B



3...♔g3!

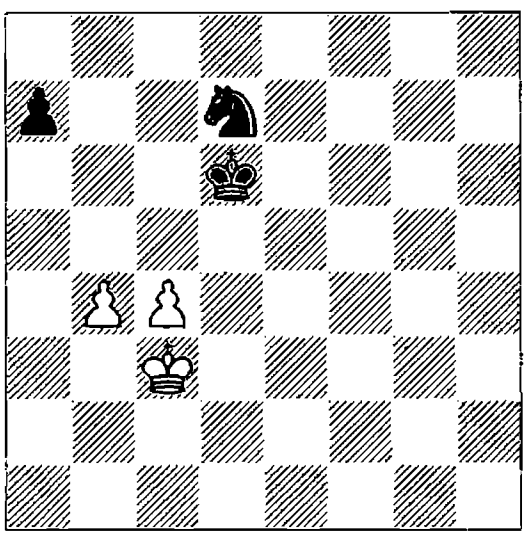
A second reciprocal zugzwang. If Black were to move, he would lose because ...♔f3 is met by ♘e5+.

4 ♘f6 ♔f3 5 ♘d5 ♔e4 6 ♘e7 ♔f3 ½-½

3.4.1 Zugzwang Ideas

Zugzwangs abound in knight endings, mainly due to a peculiar property of the knight, that if it controls a square, then any move by the knight will lose control of that square. The result is that knights are easily immobilized by having

to defend a particular square, and restricted mobility often leads to zugzwangs. Many positions of ♘+♙ vs 2♙ involve zugzwangs, some reciprocal and some not. When there are reciprocal zugzwangs about, identifying the zugzwang positions is a crucial step towards finding the right move.



Jo. Horvath – Sapis
Tbilisi 1986

White has only one pawn for the knight, but Black has just a single pawn left. If White can exchange this last pawn, the result will be a draw. The notes by Sapis in *Informator 41* correctly indicated that the diagram position is a draw, but Sapis missed several important points in the subsequent play.

1 ♔b3

This move is perfectly satisfactory. White had an alternative draw by 1 ♔d4 ♘b8! (the best try) and now:

1) 2 b5? ♘d7 and the king gets to c5, after which the win is straightforward.

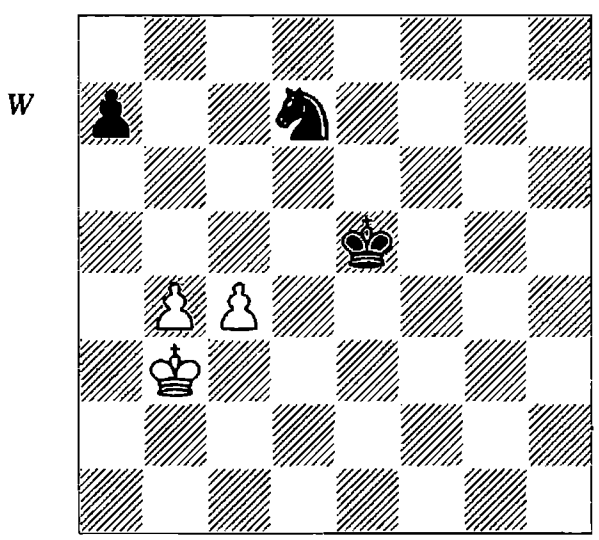
2) 2 ♔e4? ♘a6 3 b5 ♘c5+ 4 ♔d4 ♘d7 followed by ...♔c5 is the same.

3) 2 c5+? ♔c6 3 ♔c4 a6 and again the black king can occupy the 'hole' between the pawns. White shouldn't push a pawn if Black can blockade them like this.

4) 2 ♔c3? ♔e5 is a reciprocal zugzwang with White to play – see the game after Black's second move.

5) 2 ♔d3! (the only move; the key point is that the position with knight on b8 and ♔c3 vs ♔e5 is reciprocal zugzwang; the reasons for this will become clear in the following analysis) 2...♔e5 (2...♘c6 is also met by 3 ♔c3) 3 ♔c3 (now we have the reciprocal zugzwang with Black to play) 3...♘d7 (3...♔e4 4 b5! ♘d7 5 ♔b4 ♔d4 6 c5! is a draw after 6...♔d5 7 ♔a5 ♘b8 8 c6 ♔d6 9 b6 ♘xc6+ 10 ♔a6 or 6...♘xc5 7 ♔a5 ♔d5 8 b6 a6 9 b7 and Black loses his last pawn) 4 b5 ♔d6 5 ♔b4 (a reciprocal zugzwang with Black to play) 5...♘c5 6 ♔c3! (and a further reciprocal zugzwang) 6...♔c7 7 ♔d4! ♔b6 8 ♔e5! (8 ♔d5? ♘b3 is a reciprocal zugzwang with White to play) 8...♘b3 9 ♔d5 (but now it is Black to play) 9...♘d2 10 ♔d4! and Black cannot make progress.

1...♔e5 *(D)*



2 ♔c3?

White has a fair range of drawing moves, but this isn't one of them. The straightforward march towards the a-pawn would have sufficed: 2 ♔a4! ♔d4 3 c5! (3 ♔b5? ♘b8 4 c5 ♔c3 and 3 b5? ♔xc4 4 ♔a5 ♘b6 are winning for Black, but 3 ♔a5! ♘b8 4 c5! ♔c4 5 ♔a4 also draws) 3...♔d5 (3...♔c4 4 c6 ♘b6+ 5 ♔a5 ♘c8 6 ♔a6 ♔xb4 7 ♔b7 is also a draw) 4 ♔a5 ♘b8 5 ♔b5 and Black has no winning chances. Moreover, White could also have drawn by playing 2 b5 or 2 c5.

2...♘b8!

Sapis's notes in *Informator* give 2...♔e4? as better, but actually this is a mistake since 3 b5 ♔e5 4 ♔b3! ♔d6 5 ♔b4 gives one of the above reciprocal zugzwangs with Black to play. After the move played we have a reciprocal zugzwang with White to play.

3 ♔d3

This is relatively the toughest defence. The alternatives are:

1) 3 c5 ♔d5 4 ♔b3 ♘a6! 5 ♔a4 ♘c7! 6 ♔b3 (6 ♔a5 ♔c4 transposes) 6...♘b5 7 ♔a4 ♔c4 8 ♔a5 ♘c7 9 ♔a4 ♘d5 10 c6 ♘c7 11 ♔a5 ♔d5 12 b5 ♔c5 and the pawns fall.

2) 3 ♔b3 ♔d4 4 c5 ♘a6 5 ♔a4 ♘c7 6 ♔b3 ♘d5 7 ♔a4 ♔c4 8 c6 ♘c7 9 ♔a5 ♔d5 10 b5 ♔c5 and Black wins as in line 1.

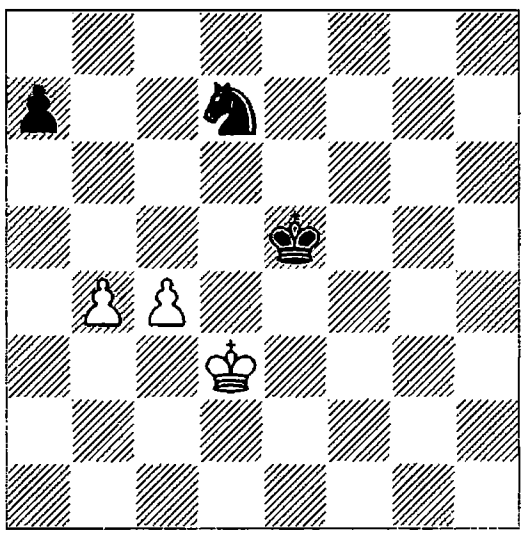
3) 3 b5 ♔d6 4 ♔b4 ♘d7 (this is a further reciprocal zugzwang) 5 ♔a5 ♔c7 6 ♔a6 ♔b8 7 ♔a5 ♔b7 8 ♔a4 ♔b6 9 ♔b4 ♘c5 10 ♔c3 ♔a5 11 ♔d4 ♘b3+ 12 ♔d5 ♔b6 (yet another reciprocal zugzwang) 13 ♔d6 ♘d4 14 ♔d5 ♘xb5 and Black wins.

3...♘a6

This does not spoil the win, but Black has to backtrack after White's reply.

4 ♔c3 ♘b8 5 ♔d3 ♘d7! *(D)*

W



On the correct path again.

6 ♔c3 ♔e4?

Despite being given an exclamation mark in *Informator*, this move throws the win away. 6...♘f6! is the quickest win: 7 b5 (7 ♔d3 ♘e4 8 ♔e3 ♘c3 9 ♔d3 ♘a4 10 ♔e3 ♘b2 11 c5 ♘a4 12 ♔d3 ♔d5 is also a win for Black) 7...♔d6 8 ♔b4 ♘d7 reaches a reciprocal zugzwang with White to play, as after 3 b5 above.

7 ♔b3?

After this Black is again winning. The drawing move was 7 b5!, transposing into the note to Black's second move.

7...♔d4

Now that Black's king occupies this active position, White has no hope of saving the game.

8 c5 ♘b8! 9 ♔a3

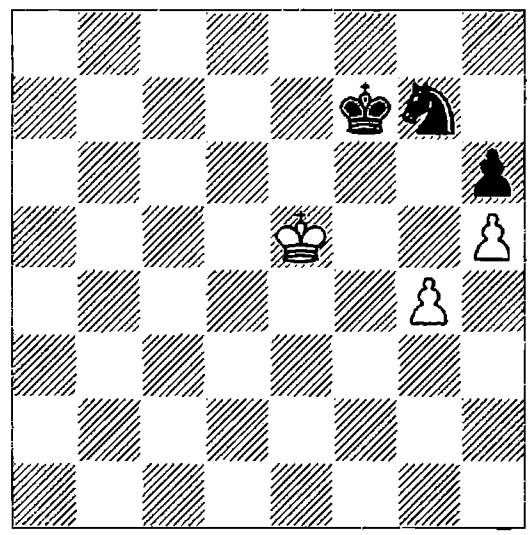
After 9 ♔a4 ♔c4 White loses more quickly.

9...♘a6! 10 ♔a4 ♘c7 0-1

11 ♔b3 ♘b5 12 ♔a4 ♔c4 13 ♔a5 ♘c7 14 ♔a4 ♘d5 is decisive.

As in king and pawn endings, in some zugzwang positions it is possible to lose a tempo and return to the position with the opponent to move. Triangulation is the most familiar of these ideas, and the following position features a kind of extended triangulation.

B



Klauser – Preissmann
Switzerland 1987

If it were White to move, then the win would be easy, as he would have to allow the black king access to f6 and then g5. With Black to move, the position is still a win, but presents greater difficulties. The basic plan is, as one might expect, to lose a tempo, but in the diagram position there is no obvious way to do so. The key idea is to transfer the knight to h7, after which it becomes possible for Black to triangulate with his king. After losing a tempo, the knight is then manoeuvred back to g7, and the diagram position arises with White to move.

1...♘e6!

The only winning move. 1...♔e7? 2 g5! hxg5 3 h6 and 1...♘e8? 2 g5 hxg5 3 ♔f5 both lead to immediate draws.

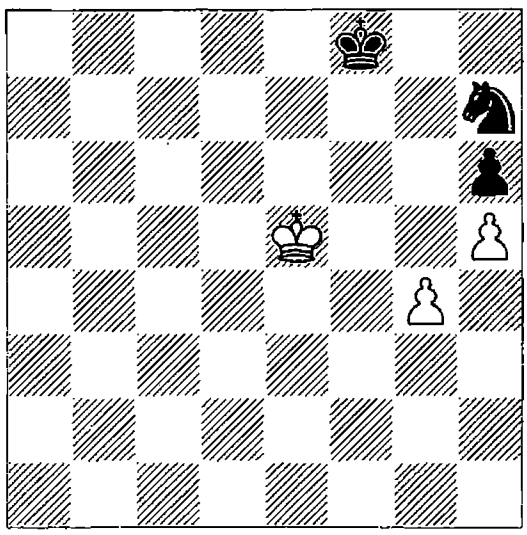
2 ♔f5

White must keep Black's king out of f6, so this is forced.

2...♘g5 3 ♔e5 ♘h7! 0-1

White rather surprisingly resigned at this point. The finish would have been 4 ♔f5 ♔g7! (with the knight on h7, Black is able to start the triangulation manoeuvre ...♔f7-g7-f8-f7) 5 ♔e5 (5 ♔e6 ♔f8 6 ♔e5 ♔e7 7 ♔f5 ♔f7 transposes to the main line) 5...♔f8! *(D)*.

W



Black is aiming to reach a position with ♔f5 vs ♔f7 and White to move; in other words, to gain the opposition. This is possible because the white king does not have access to f6, so when the black king is on f8 White has no satisfactory square for his king. Here the options are:

1) 6 ♔f5 ♔f7 reaches the target position immediately.

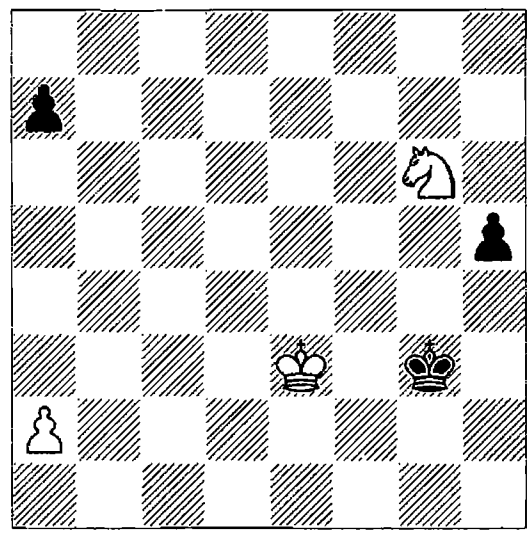
2) 6 ♔f4 ♘g5 7 ♔f5 (7 ♔e5 ♔f7 transposes) 7...♔g7 8 ♔e5 ♔f7 9 ♔f5 ♘e6 transposes to line 4 below.

3) 6 ♔e4 ♘g5+ 7 ♔f4 ♔g8! 8 ♔f5 ♔g7 9 ♔e5 ♔f7 10 ♔f5 ♘e6 also transposes to line 4.

4) 6 ♔e6 ♔e8! (now Black has the opposition) 7 ♔e5 ♔e7! 8 ♔f5 ♔f7 (the position after White's 4th move has been repeated, but with White to move) 9 ♔e5 (now the knight must return to g7, after which White will be in zugzwang and will have to allow Black's king access to f6) 9...♘g5 10 ♔f5 ♘e6 11 ♔e5 ♘g7 12 ♔e4 (12 g5 hxg5 13 h6 ♘e6 is hopeless for White) 12...♔f6 13 ♔f4 ♘e8 followed by ...♔g5 and ...♘f6, winning the g4-pawn.

Our final example with this material balance involves the most complex zugzwang situation we have encountered.

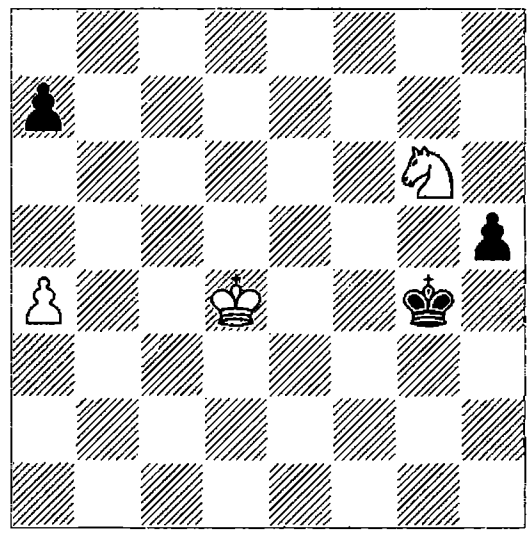
W



Yagupov – Sorokin
St Petersburg 2001

Despite the limited material, this position contains several subtleties. White won the game, and Yagupov's analysis in *Informator 83* incorrectly claimed that the diagram position is already winning. In order to understand what is happening, we must first analyse a preliminary position of reciprocal zugzwang.

W/B



Yagupov – Sorokin
Analysis diagram

Given the relatively open position of the two kings, it is surprising that this is indeed reciprocal zugzwang.

When it is Black's turn to play, he has to move his king up or down the board. If he

moves to f5 or g5, White has more chances to blockade the h-pawn with his king, while if he moves to f3 or g3, then White just pushes his a-pawn, and Black can no longer reply ...♔g5. The concrete analysis runs:

1) 1...♔g5 2 ♘e7! (not 2 ♘e5? ♔f5 and now 3 ♘c6 ♔f4! is only a draw as Black is threatening to push his h-pawn, so the knight has to come back, while 3 a5 h4 is also fine for Black since the white king is tied to defending the knight and so cannot move to e3) 2...♔f4 (2...h4 3 ♔e3 ♔g4 4 ♔f2 ♔f4 5 ♘c6 ♔e4 6 ♘xa7 ♔d5 7 ♘b5 ♔c4 8 ♘c3 and White wins) 3 a5 (this is another position of reciprocal zugzwang) and now:

1a) 3...♔g4 4 ♔e3 is a clear win for White.

1b) 3...♔f3 4 ♘g6 ♔g4 and now:

1b1) Yagupov's move 5 a6? only leads to a draw after 5...♔f5 6 ♘e7+ ♔e6 7 ♘c6 ♔d6 8 ♘xa7 h4! (Yagupov only considered 8...♔c7?, which loses to 9 ♔c5! h4 10 ♘b5+) 9 ♔e4 ♔c7 10 ♘b5+ ♔b6 11 a7 ♔b7 with a standard draw.

1b2) 5 ♔e4! ♔g5 (or 5...a6 6 ♘e7 h4 7 ♔e3 h3 8 ♔f2 ♔f4 9 ♘d5+ and White wins) 6 ♘e5 ♔f6 7 ♘c6 ♔e6 8 ♘xa7 ♔d6 9 ♘b5+ ♔c5 10 ♘d4 followed by ♘b3, winning.

2) 1...♔f5 2 ♘e7+ ♔f4 transposes to line 1.

3) 1...♔g3 (1...♔f3 2 a5 ♔g4 is the same) 2 a5 ♔g4 (Black has to spend an extra tempo driving the knight away from g6) 3 ♔e4 transposes to line 1b2.

4) 1...a6 2 ♔e4! a5 3 ♔e3 ♔g3 4 ♔e2 h4 5 ♔f1! h3 6 ♔g1 ♔f3 7 ♘e5+ ♔e4 8 ♘c4 and White wins.

It is perhaps more surprising that White cannot win when it is his turn to move, since he has considerable freedom of movement. However, it turns out that all White's moves have some defect. Moving the knight allows ...h4, while if the king moves to the e-file, then Black can again play ...h4 (♘xh4 no longer wins since the white king takes one move longer to take on a7). That leaves a5, ♔d5 and ♔d3 as possible moves, and these we analyse below.

1 ♔d3

The other possibilities are:

1) 1 ♘e7 h4 2 ♔e3 ♔g3 is a draw as the h-pawn is now too far advanced.

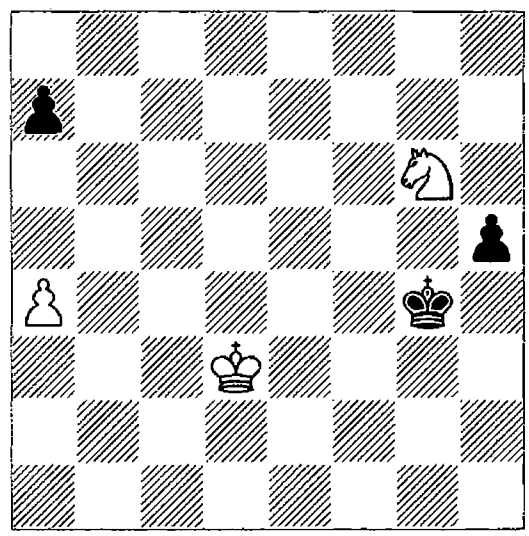
2) 1 a5 ♔g5 2 ♘e7 ♔f4 reaches the reciprocal zugzwang mentioned in the analysis of 1...♔g5 with White to play. The key point is that with Black's pawn on a7, White cannot win after 3 ♔d5 ♔g4! 4 ♔e4 h4 5 ♔e3 ♔g3! 6 ♘f5+ ♔g4 7 ♘xh4 ♔xh4 8 ♔d4 because Black's pawn is covering b6 and so it takes the white king one move more to capture the a-pawn, giving Black time to reach c8.

3) 1 ♔e3 (1 ♔e4 and 1 ♔e5 are also met by 1...h4) 1...h4 (with the king on e3 this is possible since, as mentioned above, ♘xh4 no longer wins) 2 ♔f2 ♔f5 3 ♘e7+ ♔e4 4 ♘c6 a6 5 ♘b8 ♔d4 6 ♘xa6 ♔c4 draws.

4) 1 ♔d5 ♔g5 2 ♘e7 h4 3 ♔e4 ♔g4 is also a draw.

We now return to the position arising after 1 ♔d3 *(D)*:

B



1...♔g5 2 ♘e7 ♔f4!

This is another position of reciprocal zugzwang (although the fact that it is lost with Black to move does not play a part in our analysis).

3 ♔d4

After 3 ♘c6 ♔g3 4 ♔e2 ♔g2 the h-pawn is too dangerous, while 3 ♔e2 ♔e4 draws by approaching the a-pawn.

3...♔f3

Threatening to win by playing ...h4.

4 ♘g6

4 ♘f5 ♔f4 doesn't help White.

4...♔g4

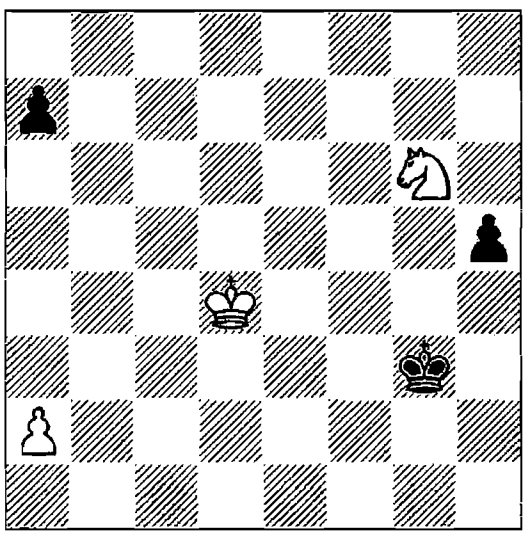
and we have returned to the original position.

Having established that the analysis position is reciprocal zugzwang, we can return to the game.

1 ♔d4!? *(D)*

White moves his king nearer the a-pawn, so that he can meet ...h4 by ♘xh4. This is a good try, as Black can only find the correct reply by penetrating deeply into the position. In particular, he has to realize that the analysis diagram is reciprocal zugzwang. 1 a4 h4 and 1 ♔e2 h4 2 ♔f1 h3 3 ♔g1 ♔f3 4 ♘e5+ ♔e3 5 ♘c6 a6 6 a4 ♔d3 7 ♘b8 ♔c4 8 ♘xa6 ♔b3 9 ♘c5+ ♔b4 are simple draws.

B



1...♔g4?

Yagupov did not remark on this move although it is the losing mistake, since White can now reach the reciprocal zugzwang with Black to play. 1...h4? loses to 2 ♘xh4 ♔xh4 3 ♔c5, but Black could have drawn with the subtle 1...♔f3!. The point is that Black must avoid playing his king to g4 until White's pawn has reached a4. After 2 a3 (2 ♔d5 ♔g4, 2 ♔d3 ♔g4 and 2 a4 ♔g4 are all drawn, the last because the reciprocal zugzwang arises with White to play) 2...♔g3! (again the only move, keeping in touch with the g4-square but not actually occupying it) 3 a4 ♔g4! we have the analysis diagram with White to play.

2 a4!

Now the reciprocal zugzwang arises with Black to play.

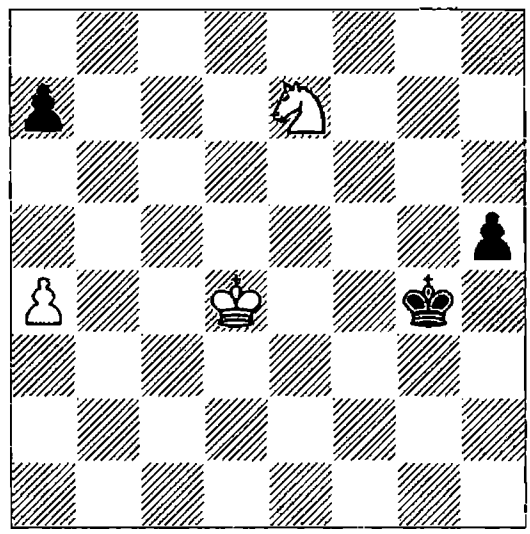
2...♔f5

2...♔g5 3 ♘e7 transposes.

3 ♘e7+! ♔g4 *(D)*

3...♔f4 transposes to line 1 of the analysis diagram (with Black to play).

W



4 ♔e3 ♔g3 5 ♔e2 ♔g2

5...h4 6 ♔f1 and White wins.

6 ♘f5 a5 7 ♔e3 ♔h3 8 ♔f3 ♔h2

Or 8...h4 9 ♔f4.

9 ♘e3 ♔h3

9...♔g1 10 ♔g3 also wins for White.

10 ♘c4 1-0

Summary:

- Zugzwangs arise frequently in endings of ♘+♙ vs 2♙ and in many cases it is impossible to play the position correctly unless you first identify the key zugzwang position.
- If it is your turn to move, but you would prefer your opponent to move first, you may be able to manoeuvre with king and knight to lose a tempo. A typical idea is to place the knight on a square which frees the king for a triangulation.

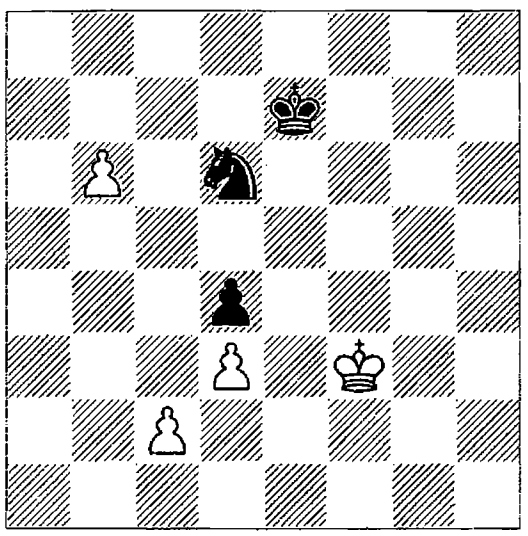
3.5 Knight + Pawns vs Pawns (More Pawns)

For the moment we remain with endings in which only one side has a knight, but now we look at positions with more pawns. Such endings are often misplayed in practice and misanalysed afterwards. The reason seems to be that endings of this type often depend on tricky knight manoeuvres that are not at all obvious. Moreover, reciprocal zugzwangs are common.

The demands placed upon the knight in the endgame are rather different from those in the middlegame. In the earlier stages of the game, the knight's forking ability and strength when occupying an outpost are the most important factors, but in an endgame the knight's key asset is its ability to reach any square on the board. It follows that no pawn is immune from attack by the knight. Set against this is the knight's short-range nature, which causes it to struggle when faced with a distant passed pawn.

3.5.1 Knight Manoeuvres

The first example shows how subtle knight manoeuvres may be necessary, especially when there are reciprocal zugzwangs about.



Ju. Armas – Grooten
Bucharest – Eindhoven match 1985

This position is winning for Black and in the game Grooten played very accurately to secure the full point. The basic point is that Black must not rush to capture the b-pawn. It is more important to prevent White's king from taking up an active position, even if this means that Black has to leave the b-pawn on the board for the moment.

1...♔d7

1...♔e6? 2 b7 ♘xb7 3 ♔e4 is an immediate draw, so Black's move is forced.

2 ♔f4

Moving up to attack the d4-pawn is the best chance, since other moves lose more quickly: 2 b7 (after 2 ♔e2 ♔c6 3 ♔d2 ♘b5 Black prevents c3 and wins easily) 2...♔c7 3 ♔f4 ♔xb7 4 ♔e5 ♘b5 5 ♔d5 ♔b6 is a position of reciprocal zugzwang. Here White is to play so Black wins; for example, 6 ♔c4 ♔c6 7 ♔b4 ♘c3 8 ♔c4 ♘e2 9 ♔b4 ♔b6 10 ♔a4 (10 ♔c4 ♔a5 is similar) 10...♔c5 11 ♔a3 (Black wins after 11 ♔a5 ♘c3 12 ♔a6 ♘d1 followed by ...♘e3) 11...♔b5 12 ♔b3 ♘c3 13 ♔a3 ♘a4 14 ♔b3 ♘c5+ 15 ♔a3 ♔a5 16 ♔a2 ♔a4 17 ♔b2 ♔b4 and Black's king penetrates to c3.

2...♔c6 3 ♔e5 ♔c5!

The only way to win. Instead 3...♘b5 4 ♔e4 just wastes time since then Black can only win by 4...♔c5 (4...♔xb6? 5 ♔d5 is the above reciprocal zugzwang with Black to play; after 5...♔a6 6 ♔c5 ♔a5 7 ♔c4 ♔b6 8 ♔d5 Black cannot make progress) 5 ♔e5 ♘d6, transposing to the game.

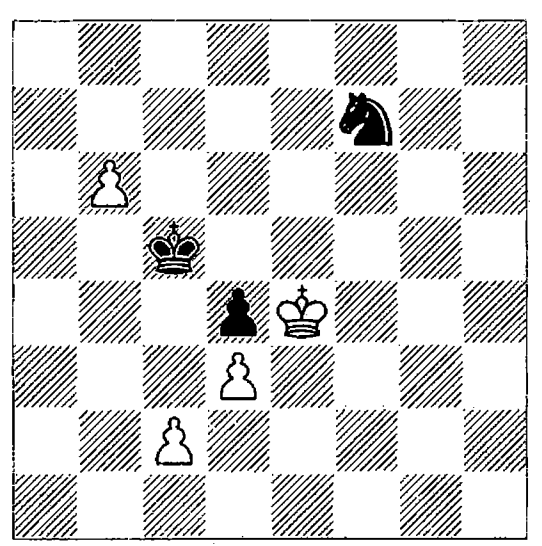
4 ♔e6

Otherwise Black can simply take the b-pawn.

4...♘b7

The start of a neat knight manoeuvre which forces White into zugzwang.

5 ♔e5 ♘d8 6 ♔e4 ♘f7! *(D)*



The key move. White cannot push the pawn due to ...♘d6+, so he has to withdraw his king from the attack on the d4-pawn.

7 ♔f5

The best defence. If the king moves to f4 then Black can take the pawn.

7...♔d5!

It is still too early to capture the b-pawn: 7...♔xb6? 8 ♔e6 ♘d8+ 9 ♔d5 ♘c6 10 ♔c4 followed by c3 draws.

8 ♔g6

White was in zugzwang and indeed this was another position of reciprocal zugzwang. Every move makes a concession of some kind:

1) 8 ♔f4 ♘d6 9 ♔g5 ♔c6 10 ♔f6 ♔xb6 11 ♔e6 ♔c5 12 ♔e5 ♘b5 and Black wins.

2) 8 ♔f6 ♘d6! is another reciprocal zugzwang; White must move his king away since 9 ♔e7 (after 9 ♔g5 ♔c6 Black simply takes the b-pawn) 9...♘c8+ costs him the pawn.

3) 8 ♔g4 ♘d6 9 ♔f4 ♔c5 10 ♔e5 ♘b7 11 ♔e4 ♘d8 12 ♔e5 ♘c6+ 13 ♔e6 ♔xb6 is a win for Black.

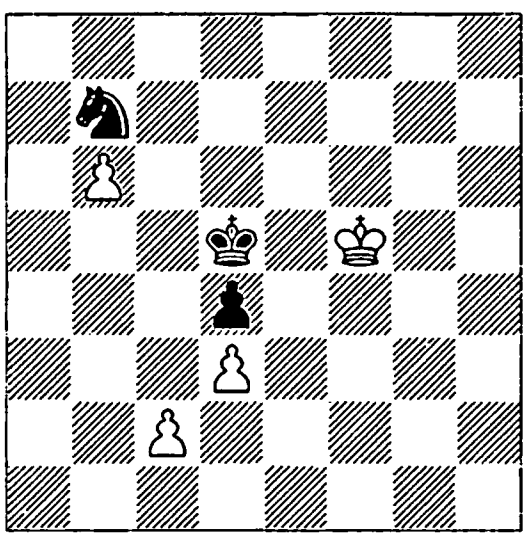
8...♘d8!

The only move to win. 8...♘d6? 9 ♔f6 arrives at one of the reciprocal zugzwangs with Black to play, and therefore the result is a draw.

9 ♔f5

9 ♔f6 now loses after 9...♔c5! 10 ♔e5 ♘c6+ 11 ♔e4 ♔xb6 12 ♔d5 ♔b5.

9...♘b7! *(D)*



The knight returns to the earlier square b7, but in the meantime Black's king has occupied the important d5-square.

10 ♔f4

10 ♔f6 ♘d6 is the reciprocal zugzwang mentioned in the note to White's 8th move.

10...♘d6

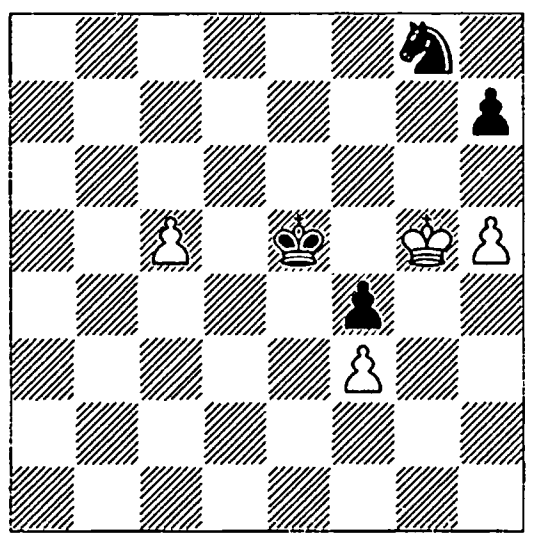
White's king must now retreat further and this gives Black time to make a run for the b-pawn.

11 ♔f3 ♔c6 12 ♔e2 ♔xb6

Mission accomplished. Now the win is simple.

13 ♔d2 ♘b5 14 ♔c1 ♔c5 15 ♔b1 ♔b4 16 ♔b2 ♘a3 17 c4 dxc3+ 0-1

The following position again features a reciprocal zugzwang (see the note to Black's third move) and the complexities proved too much for one of the players and annotator Minev.



Vamraak – Roine

Norway 1979

Here White has just one pawn for the knight, but Black has only two pawns left and his knight is initially rather poorly placed. According to Minev in *Informator 28*, the position should be a draw, but as we shall see, Black can win with accurate play.

1 c6

White's best chance is to use his passed pawn to deflect Black's king.

1...♔d6

Black correctly heads to take the c-pawn with his king, leaving the knight to keep White's king away from the h-pawn. In the process Black loses his f-pawn, but he only needs one pawn to win. 1...♘e7? is wrong as 2 c7 ♔d6 3 ♔xf4 ♔xc7 4 ♔e5! ♘g8 5 ♔e6 is only a draw.

2 ♔f5

2 ♔xf4 ♔xc6 3 ♔e5 ♔d7 keeps the white king out, winning.

2...♘e7+?

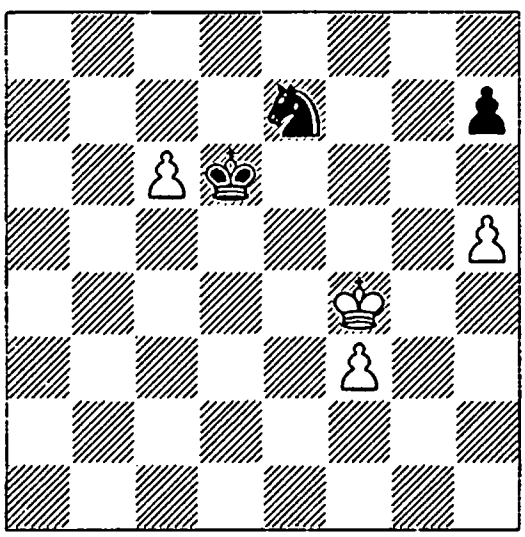
This is the move which throws away the win. Black could have turned the battle in his favour by 2...♔xc6! 3 ♔e6 (Minev stopped his analysis here, just when Black could strike the decisive blow) 3...♘h6! 4 ♔e5 (4 ♔f6 ♔d5 5 ♔g7

♘f5+ 6 ♔xh7 ♔e5 7 ♔g6 ♘h4+ 8 ♔g7 ♘xf3 is also winning for Black) 4...♔d7 5 ♔xf4 (or 5 ♔d5 ♘f7) 5...♔e6 6 ♔g5 ♘f7+ and White's king must retreat.

3 ♔xf4! *(D)*

3 ♔f6? loses to 3...♘xc6 4 ♔g7 ♔e6 5 ♔xh7 ♘e5 6 ♔g7 ♘xf3.

B



3...♔xc6

This allows White to draw straight away. 3...♘xc6 4 ♔g5 and 3...♔e6 4 ♔g5 ♘g8 5 c7 ♔d7 6 ♔f5 ♔xc7 7 ♔e6 are also easy draws, but Black could have posed more problems by playing 3...h6!?, and now:

1) 4 ♔e4? ♔e6! 5 c7 ♔f6 6 f4 ♔e6 7 ♔f3 ♔f5 (this is a position of reciprocal zugzwang) 8 ♔g3 ♘c8 9 ♔f3 ♘d6 10 ♔g3 ♔e6 11 ♔g4 ♔d7 12 f5 ♔xc7 and Black wins.

2) 4 c7! ♔e6 5 ♔g4 ♔e5 6 f4+ ♔e4 7 ♔g3 ♔f5 8 ♔f3 and now it is Black to play in the reciprocal zugzwang position; he cannot lose a tempo with his knight and so White draws after 8...♘c8 9 ♔e3 ♘d6 10 ♔f3 ♔e6 11 ♔e3 ♔d7 12 ♔d4 ♔xc7 13 ♔e5.

4 ♔e5!

The only drawing move. 4 ♔g5? ♘g8 5 ♔f5 ♔d6 is winning for Black.

4...♔d7 5 ♔f6

Black cannot save the h-pawn.

5...♔e8

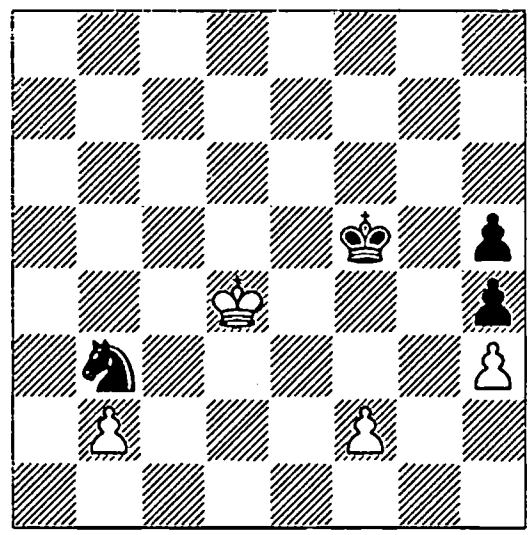
5...h6 6 ♔g7 ♘f5+ 7 ♔f6 is also a draw.

6 ♔g7 ♘f5+ 7 ♔xh7 ♔f7 8 ♔h8 ½-½

Avoiding the trap 8 h6? ♘e7 9 ♔h8 ♘g8 10 ♔h7 ♘f6+ 11 ♔h8 ♔f8 12 f4 ♔f7 13 f5 ♔f8 14 h7 ♘d5 15 f6 ♘f4 followed by mate.

The knight is at its worst when it has to cope with a distant passed pawn since such a pawn may totally neutralize the knight. The knight may even have difficulties when the pawn is still on the second rank.

W



Rozentalis – Afek
Tel Aviv 1989

This interesting ending was analysed by Rozentalis in *Informator 48*. At first sight White, with only one pawn for the knight, is in a hopeless situation. However, Black's king has to undertake quite a long journey to capture the h3-pawn, while in the meantime White can gain counterplay with the b-pawn. The game ended in a draw and according to Rozentalis both sides played accurately. In fact Black missed an instructive win, which was not so easy to spot.

1 ♔d5!

This cunning defence creates the greatest difficulty for Black. All other moves lose rather simply; for example, 1 ♔c4? ♘d2+ 2 ♔d5 ♘e4 3 b4 ♘xf2 4 b5 ♘xh3 5 b6 ♘f4+ 6 ♔d6 h3 7 b7 h2 8 b8♕ h1♕ and Black wins with his extra material, or 1 ♔e3? ♘c5 2 b4 ♘a6 3 b5 ♘c7 4 b6 ♘d5+ and the pawn falls. Nevertheless it is hard to see why 1 ♔d5, which doesn't threaten anything, is a better move. The answer is that if Black moves his knight then the b-pawn can advance immediately, while if Black plays ...♔f4, his king will be on a square that allows the b-pawn to promote with check.

1...♔f4

Despite its downside, this is the strongest move.

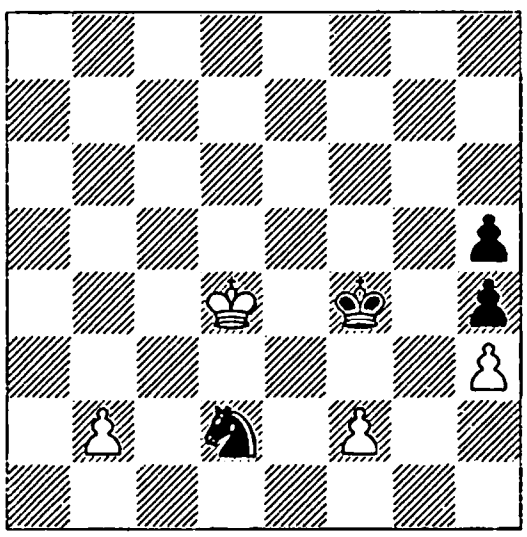
2 ♔c4

Now that Black's king is on a more exposed square, White switches to the ♔c4 plan.

2...♘d2+ 3 ♔d4! *(D)*

White puts up the maximum resistance. 3 ♔d5? loses to 3...♔f3 4 b4 ♘b1! 5 ♔c4 (5 b5 ♘c3+) 5...♘a3+ 6 ♔b3 ♘b5 7 ♔c4 ♘c7 and now Black's king is free to gobble up White's kingside pawns.

B



3...♘f3+?

As so often happens, an unexpectedly stern resistance eventually confuses the attacker and prompts a mistake. Here are the alternatives:

1) 3...♘e4? 4 b4 ♘xf2 5 b5 is a draw since Black cannot take the h3-pawn and get back in time to stop the b-pawn.

2) 3...♘b1? 4 ♔d3 ♔f3 5 ♔c2 ♔xf2 (5...♔g2 6 f4 ♔xh3 7 f5 ♔g3 8 f6 h3 9 f7 h2 10 f8♕ h1♕ 11 ♕g7+ is a clear draw because there is no avoiding the perpetual check with Black's pieces stuck on the edges of the board) 6 ♔xb1 ♔g3 7 b4 ♔xh3 8 b5 ♔g4 9 b6 h3 10 b7 h2 11 b8♕ h1♕+ 12 ♔c2! (12 ♔b2? ♕g2+ 13 ♔c1 h4 wins for Black, although it is a difficult win requiring 74 moves). The logic behind playing the king to c2 is that the normal plan of heading for the a8-corner with the king isn't feasible because after ...♕g2+ White's king cannot move to the third rank due to ...♕g3+. Thus White's king is for the moment restricted to the first two ranks. This is quite a serious problem for White and would often spell defeat, but it turns out that by heading for the kingside with his king, and thereby denying Black the opportunity to exchange queens at some point, White can just about draw. The continuation might be 12...♕g2+ 13 ♔d1! h4 14 ♕g8+ ♔h3 15 ♕e6+ ♔h2 16 ♕d6+ ♔h1 17 ♕f4! h3 18 ♔e1 and White is close enough to hold the game.

3) 3...♔f3! 4 b4 ♔g2 is the winning line, which is based on the point that for the moment White cannot play b5 due to ...♘b3+ and ...♘a5-b7, holding up the pawn. Therefore White has to move his king again, but this costs time and Black ends up gaining the king transfer to g2 for free: 5 ♔d3 (after 5 b5 ♘b3+ 6 ♔c4 ♘a5+ Black wins easily) 5...♘f3 6 ♔e4 (6 b5 ♘e5+ 7 ♔d4 ♘d7 is also simple) 6...♘g5+ 7 ♔f5 (7 ♔d5 ♘xh3 is similar) 7...♘xh3 8 b5 ♘xf2 9 b6 h3 10 b7 h2 11 b8♕ h1♕ and White has only a couple of checks, after which Black's material advantage will prove decisive.

4 ♔d5

Compared to the 3...♔f3 line, Black's king is far less actively placed, and this enables White to draw.

4...♔f5

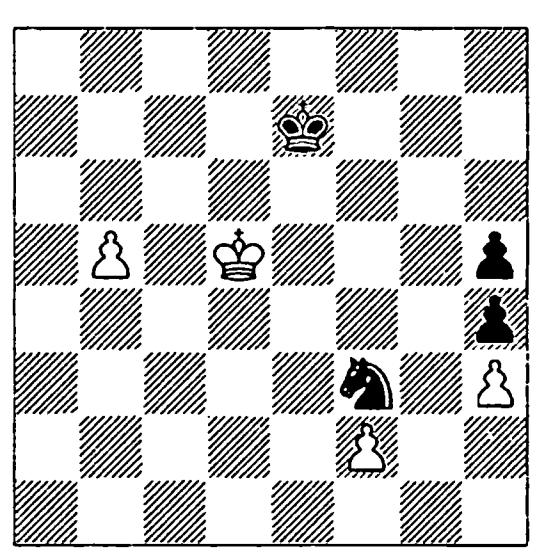
Or 4...♘g5 5 b4 ♘xh3 6 b5 ♔f5 7 b6 ♘f4+ 8 ♔d6 h3 9 b7 h2 10 b8♕ h1♕ 11 ♕f8+ ♔g4 12 ♕g8+ and White draws, as moving to h3 or h4 allows mate in one, while 12...♔f3?? loses the queen after 13 ♕a8+.

5 b4 ♔f6

Black decides to try using his king to stop the advancing b-pawn, but White can frustrate this plan.

6 b5 ♔e7 *(D)*

W



7 ♔c6!

White uses his king to support the b-pawn. If Black brings his knight back as well, then he frees the f-pawn. Not 7 b6? ♔d7 8 ♔e4 ♘g5+ and Black wins.

7...♘d4+

7...♔d8 8 ♔b7 is also drawn.

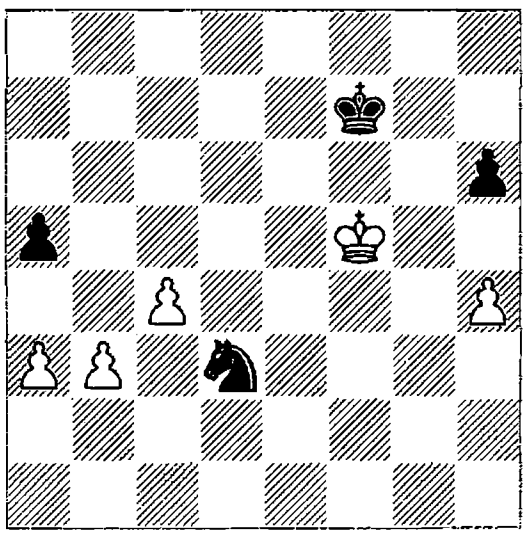
8 ♔c5 ♘e6+ 9 ♔c6 ♘d4+

Black has no further winning attempts.

10 ♔c5 ½-½

In the following position White has two pawns for the knight, but he is soon forced to surrender one of his queenside pawns. By now, readers will not be surprised to learn that everything depends on a position of reciprocal zugzwang.

W



Bilyap – M. Milanov
Bulgaria 1971

White can try to draw either by liquidating the a-pawn or by playing to support the c-pawn with his king. Black can win according to the notes by Estrin in *Informator 13*, but he is mistaken.

1 h5!

An excellent choice, forcing Black to move his king to a less active position, and the only move to draw. Immediately trying to force the issue on the queenside is not successful since after 1 b4? ♘xb4! 2 axb4 a4 Black's king can stop the b-pawn, while 1 c5? ♘xc5 2 b4 axb4 3 axb4 ♘a4 4 b5 ♘b6 5 h5 ♘c4! forces the white king to retreat, after which Black wins the h-pawn.

1...♔g7

1...♘c1 is no better: 2 b4 a4 3 b5! (but not 3 ♔e4? ♘e2 4 ♔d5 ♔e7 5 ♔c6 ♘f4 when Black wins after 6 b5 ♔d8 7 b6 ♔c8 or 6 c5 ♘xh5 7 ♔b7 ♘g7 8 c6 ♘e8 9 b5 ♘d6+ 10 ♔b6 ♘xb5 11 ♔xb5 ♔d8) 3...♘b3 4 ♔e5 ♔e7 5 ♔f5! and Black has nothing better than to return to f7.

2 ♔e6

White plays to support the c-pawn at the cost of giving up his b-pawn. He could also have drawn by the alternative plan of eliminating Black's a-pawn, for example by 2 c5 ♘xc5 3 b4 axb4 (3...♘b3 4 bxa5 ♘xa5 5 a4) 4 axb4 ♘d7 5 ♔e6! ♘b6 6 b5 with a comfortable draw.

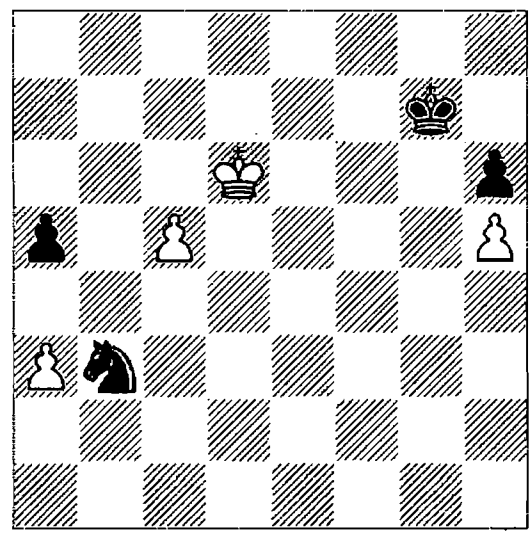
2 b4 is also adequate since 2...axb4 (2...♘xb4 3 axb4 a4 only leads to a draw here as Black's king cannot stop the b-pawn) 3 axb4 ♘xb4 4 c5 ♔f7 5 ♔e5 reaches a position of reciprocal zugzwang with Black to move, when White draws after 5...♔e7 6 ♔f5 or 5...♘d3+ 6 ♔d6 ♔e8 7 c6 ♔d8 8 ♔e6.

2...♘c5+

2...♔f8!? is an interesting try which requires accurate handling by White: 3 ♔f6! ♘f4 4 ♔f5 ♘xh5 5 ♔g6 ♘f4+ 6 ♔xh6 ♘e6 7 ♔g6 ♔e7 8 ♔f5 ♔d6 (8...♘d4+ 9 ♔e5 ♘xb3 10 ♔d5 ♔d7 11 c5 draws) 9 b4 a4 10 ♔e4 and Black's advantage is insufficient to win.

3 ♔d6 ♘xb3 4 c5 *(D)*

B



4...♔f6

According to *Informator*, 4...a4 5 c6 ♘d4 wins for Black, but if we continue the line then 6 ♔d7 (6 ♔c5 and 6 ♔d5 also draw) 6...♘b5 7 ♔e7 reaches a surprising position of reciprocal zugzwang. If White were to move, he could not

play ♔e8 due to ...♘xa3, while after ♔e6 Black plays ...♔f8 and activates his king. However, it's Black to move and after 7...♘c7 (7...♔g8 8 ♔f6! draws) 8 ♔d6! ♘a8 9 ♔c5 (9 c7? loses to 9...♘xc7 10 ♔xc7 ♔f6) 9...♔f6 10 ♔b5 ♔e7 (10...♔g5 11 ♔xa4 ♔xh5 12 ♔b5 ♔g5 13 ♔a6 ♘c7+ 14 ♔b7 ♘e6 15 c7 ♘xc7 16 ♔xc7 is also a draw) 11 ♔xa4 ♔d6 12 ♔b5 ♔c7 13 ♔c5 ♘b6 14 a4 ♘c8 15 ♔d5 White heads for the kingside and draws.

5 a4?

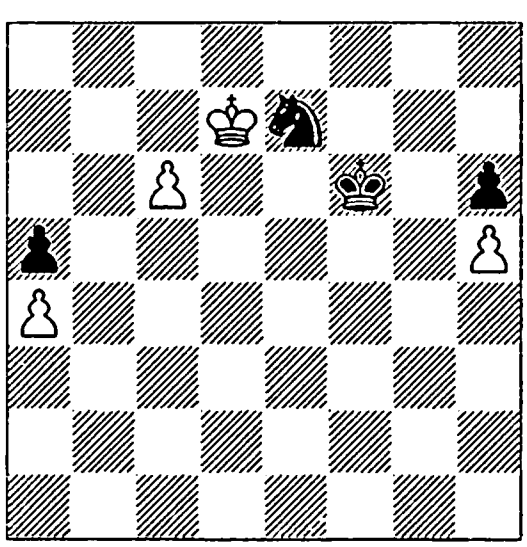
However, this move, given an exclamation mark by *Informator*, does lose. 5 c6! ♘d4 6 a4 is correct, transposing to the game while avoiding the possibility mentioned in the next note.

5...♘d4?

Black misses the winning line and now the game is once again a draw. He could have exploited White's mistake by 5...♘d2! 6 c6 ♘e4+ 7 ♔d5 ♘c3+ 8 ♔c4 (8 ♔d6 ♘xa4 9 c7 ♘b6 also wins for Black) 8...♘xa4 9 ♔b5 ♘c3+ 10 ♔xa5 ♘d5 11 ♔b5 ♔g5 with a comfortable win for Black. The knight path b3-d2-e4-c3-a4-b6 may look rather long, but Black has just enough time to take the a-pawn and stop White's c-pawn. It is for this reason that White should have played c6 a move earlier, forcing Black to commit his knight to d4 immediately.

6 c6 ♘f5+ 7 ♔d7 ♘e7 *(D)*

W



Black stops the pawn, but without taking White's a-pawn. Now the position is a draw as Black cannot make progress.

8 c7

8 ♔d6 ♘c8+ 9 ♔c7 also draws.

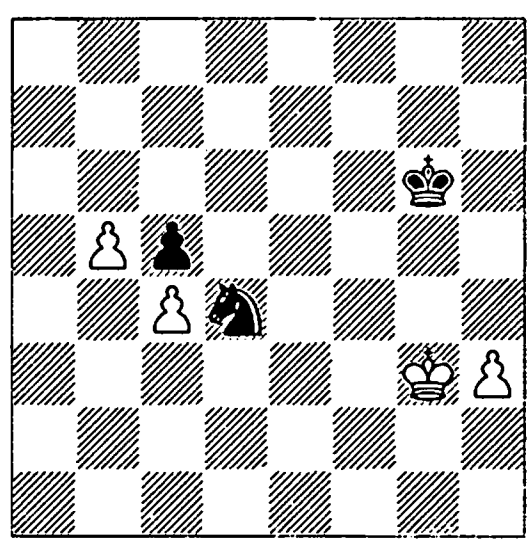
8...♘d5 9 ♔d6

9 ♔c6 ♔e5 10 c8♕ is another way to draw; for example, 10...♘e7+ 11 ♔d7 ♘xc8 12 ♔xc8 ♔d4 13 ♔d7 ♔c5 14 ♔e7 ♔b4 15 ♔f6 ♔xa4 16 ♔g7 ♔b5 17 ♔xh6 a4 18 ♔g7 a3 19 h6 and White is in time. Not, however, 9 c8♕? ♘b6+ and Black really does win.

9...♘b6 10 ♔c6 ♘c8 11 ♔b7 ♘e7 12 ♔a6 ♔e6 13 ♔xa5 ♔d7 14 ♔b6! ♘d5+ 15 ♔b7 ♘xc7 16 a5 ♔d6 17 a6 ♔d7 18 a7 ♔d6 19 ♔b6 ♔d7 20 ♔b7 ½-½

Sometimes it is the side with the knight that is on the defensive, even if there are only two pawns for the knight.

B



Vulević – Soos

Berne 1977

1...♔f5?!

The losing move according to Minev in *Informator 24*, but this is not so and Black could still have drawn even after the text-move. 1...♘f5+! is, however, a simpler and safer plan; after 2 ♔f4 ♘d6 3 b6 ♔h5 White's king cannot approach the b-pawn as e5 is out of bounds.

2 b6 ♘c6 3 b7 ♘b8

3...♔e5 also draws; for example, 4 h4 (4 ♔g4 ♔d6 5 ♔f5 ♔c7 6 h4 ♘e7+ 7 ♔f6 ♘g8+ 8 ♔g7 ♘e7 9 h5 ♔xb7 is again a draw) 4...♔f5 5 ♔f3 ♘b8 6 ♔e3 ♘a6 7 ♔d3 ♔g4 8 ♔e4 ♔xh4 9 ♔d5 ♔g5 10 ♔c6 ♔f5 and Black's king arrives back in time.

4 ♔f3 ♘c6

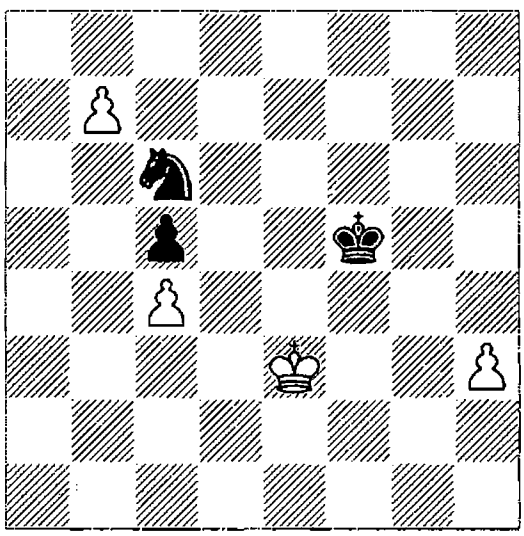
4...♔g5? loses to 5 ♔e4, as Black has voluntarily allowed the white king to penetrate.

Contrary to Minev's notes, 4...♔e5 does not lose since after 5 ♔g4 ♔d6 6 h4 ♔c7 7 h5 ♘d7 the knight is in time to stop the h-pawn on the sixth rank.

5 ♔e3!? *(D)*

Black draws more simply after 5 h4 ♘b8! 6 h5 ♘a6!, so the move played is the best chance, although Black could still have drawn by accurate play. White intends to penetrate with his king via a4, and against this Black has two basic plans. The first is to play the king to c7 and stop the h-pawn with the knight, and the second is to take the h-pawn with the king and then make it back to the queenside in time to save the game.

B

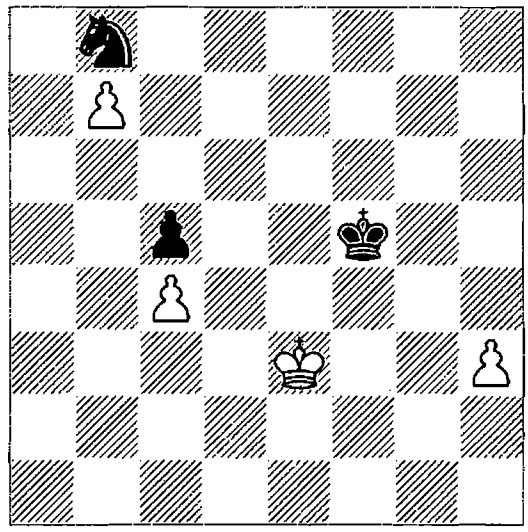


At the moment White is threatening to win by 6 h4 ♘b8 (6...♔g4 7 ♔e4 wins for White) 7 ♔d3! ♘a6 (after 7...♔g4 8 ♔e4 White wins as the knight is still one move from a6, while 7...♘d7 is met by 8 h5) 8 ♔c3 ♔g4 9 ♔b3 ♔xh4 10 ♔a4 and Black is one tempo too slow. There are two important points for Black to note in this line; the first is that he must prevent White from gaining a tempo by attacking the enemy knight with his king, and the second is that he should not allow White to take the pawn on c5 and thus gain a second passed pawn. It follows that when the white king penetrates via e4, the best square for the black knight is a6, defending the c-pawn and keeping the knight well away from the white king. It's because the knight is currently badly placed on c6 that White threatens to win by playing h4. Black's correct plan is therefore to transfer the knight to a6 as quickly as possible, to take the sting out of the h4-h5 plan. Then White is left only with the king to a4 plan.

5...♔e5?

The losing move. Black doesn't realize that the knight must be played round to a6 and so loses without a fight. He could still have drawn by 5...♘b8! *(D)*, and now:

W

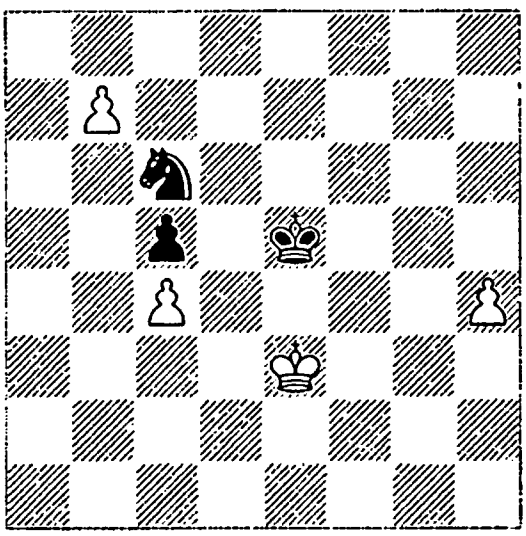


1) 6 h4 ♘a6! is an easier draw for Black than line 2, but not here 6...♔g4? 7 ♔e4 ♔xh4 8 ♔d5 ♔g5 9 ♔xc5 ♔f6 10 ♔d6 and White wins.

2) 6 ♔d3 ♘a6! (this move was not considered by Minev; 6...♔f4? loses a vital tempo and allows White to win by 7 h4! ♘a6 8 ♔c3 ♔g4 9 ♔b3 ♔xh4 10 ♔a4 ♔g5 11 ♔b5 ♘b8 12 ♔xc5 ♔f6 13 ♔d6) 7 ♔c3 (7 h4 ♔g4 8 ♔e4 ♔xh4 is now a draw, while attempting to lose a tempo somehow by 7 ♔d2 doesn't work because Black always has the waiting move 7...♔f4) 7...♘b8! (now that the white king no longer threatens to penetrate via e4, the knight must return to b8 to prevent White from gaining a tempo when his king arrives on b5; 7...♔f4? loses to 8 ♔b3 ♔g3 9 ♔a4, etc.) 8 ♔b2!? (the best try, as Black draws after 8 ♔b3 ♔e6 9 h4 ♘c6! thanks to the poor position of the white king, which allows Black to gain a tempo via the threat of ...♘a5+, and then Black is in time after 10 ♔a4 ♔d7 11 ♔b5 ♔c7) 8...♘d7! (8...♔e6? loses to 9 h4 ♘c6 10 h5) 9 ♔a3 (9 h4 ♔g4! 10 ♔a3 ♔xh4 11 ♔a4 ♔g4 12 ♔b5 ♔f5 13 ♔c6 ♔e6 and again Black is in time) 9...♔e5 10 ♔a4 ♔d6 11 ♔a5 ♔c7 12 ♔a6 ♔b8 and Black saves the game.

6 h4! *(D)*

B



Now Black has no time to move his knight to a6 and so he loses.

6...♔d6

6...♔f5 7 h5 ♔g5 8 ♔e4 also wins for White.

7 h5 ♔c7 8 h6 ♘e5 9 h7 ♘f7 10 ♔f4 ♔xb7 1-0

After 11 ♔f5 ♔c7 12 ♔f6 ♘h8 13 ♔g7 ♔d7 14 ♔xh8 Black is one tempo too late to block in the white king.

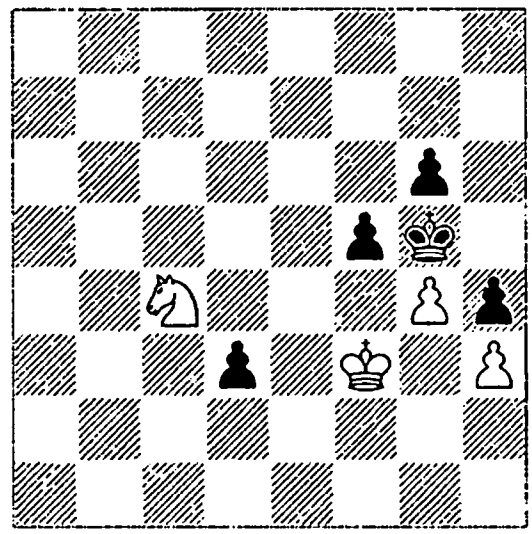
Summary:

- In endgames, the knight's main strength is that it can reach every square on the board, so no enemy pawn is safe from attack. However, a knight can take several moves to reach a specific square, and so it may be necessary to manoeuvre carefully with the knight in order to make progress.
- A knight can experience difficulties against a distant passed pawn, even if the pawn is only on the second rank.
- A knight cannot lose a tempo, so zugzwang positions arise quite often.
- In order to avoid the enemy king gaining a tempo by attacking the knight, it is sometimes necessary to make preparatory knight moves to withdraw the knight from a potential attack.

3.5.2 Mate and Stalemate

Tactical ideas such as mate and stalemate occur occasionally in knight endings, so we give one example of each. In the first position White missed a winning line, found by Averbakh, in which White delivers mate after Black promotes.

W



Y. Sakharov – Vasiukov
USSR Ch, Alma-Ata 1968/9

1 gxf5?!

Making things more difficult; White could have won more simply by 1 ♘d2! fxg4+ 2 hxg4 ♔f6 (2...h3 3 ♔g3 h2 4 ♘f3+ and 5 ♔xh2 wins) 3 ♔f4! ♔e6 4 ♔e3! ♔f6 5 ♘f3 followed by ♔xd3. Note that this is another example of the plan described in the analysis of Korensky-Suetin in the introduction (page 11): the knight and king change roles with the king going after the enemy passed pawn, while the knight helps to set up a barrier preventing a counterattack on the attacker's last pawn.

1...♔xf5 2 ♘e3+?!

Based on Averbakh's analysis, it has repeatedly been claimed that this is the move that throws away the win; for example, the *Encyclopaedia of Chess Endings* (Šahovski Informator, 1993) repeats this view. However, White can still win even after this move. Averbakh gave the following beautiful winning line: 2 ♔e3! g5 3 ♔f3 ♔e6 4 ♔g4 ♔f6 5 ♘d2 ♔g6 6 ♘e4 ♔h6 7 ♔f5! ♔h5 8 ♘f6+ ♔h6 9 ♘g4+ ♔h5 10 ♔f6!! d2 11 ♔g7 d1♕ 12 ♘f6#.

2...♔e5 3 ♔g4?

After this the win disappears forever. White can still reach Averbakh's line by playing 3 ♘f1! (3 ♘c4+? ♔d4 4 ♘d2 ♔c3, however, is a draw) 3...♔f5 (or 3...♔d4 4 ♔f4 ♔c4 5 ♔e4! ♔c3 6 ♔e3 ♔c4 7 ♘d2+ ♔c3 8 ♘f3 and White wins the d3-pawn) 4 ♔e3 ♔e5 (4...g5 5 ♔f3

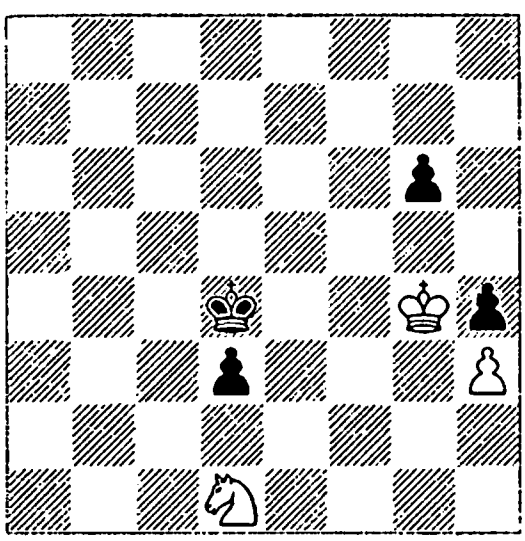
♔e5 6 ♘d2 also transposes) 5 ♘d2 g5 6 ♘e4 ♔f5 7 ♔f3 ♔g6 8 ♔g4 ♔h6 9 ♔f5, etc.

3...♔d4!

Black takes his chance to launch a counter-attack which secures the draw.

4 ♘d1 *(D)*

B



4...♔e4!

Black defends well and avoids the losing 4...d2? 5 ♔xh4 ♔d3 6 ♔g5 ♔e2 7 ♘b2 ♔f2 8 h4 ♔g3 9 ♘d1 (this is a reciprocal zugzwang) 9...♔h3 10 ♘c3 ♔g3 11 ♘e4+.

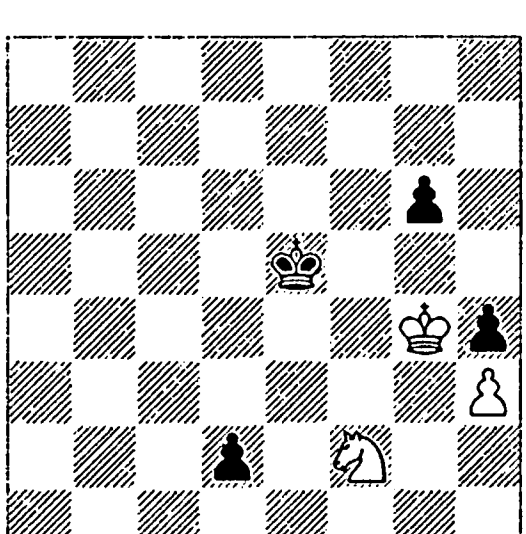
5 ♘b2 d2 6 ♘d1 ♔e5

6...♔d3 7 ♔xh4 ♔e2 8 ♘b2 ♔f3 9 ♔g5 ♔g3 10 h4 ♔h3 also draws, as White is on the wrong end of the reciprocal zugzwang.

7 ♘f2 *(D)*

7 ♔xh4 ♔f4 8 ♘b2 g5+ 9 ♔h5 ♔g3 is a draw.

B



7...♔e6 8 ♔xh4 ♔f5 9 ♔g3 g5 10 ♔f3 ♔g6!

The only move to draw, but Black finds it.

11 ♔e2

White heads for the d2-pawn, but he cannot avoid the resulting positional draw.

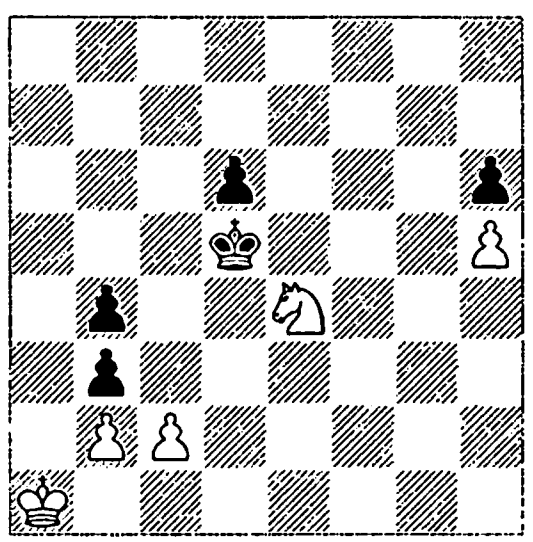
11...♔h5 12 ♔xd2 ♔h4 13 ♔e1 ♔g3 14 ♔f1

14 ♔e2 ♔g2 15 ♔e3 ♔g3 is the same.

14...♔h2 ½-½

White cannot make progress.

W



Palevich – Luzniak
corr. 1981

In this curious position, White has two different ways to draw, both of them rather surprising.

1 ♘f6+!

Palevich's notes didn't mention that White had a second way to draw: 1 ♘c3+! bxc3 (1...♔d4 2 cxb3 bxc3 3 ♔b1! cxb2 4 ♔xb2 d5 5 ♔c2 ♔e3 6 b4 ♔e2 7 ♔c3 ♔e3 8 ♔c2 is also a draw) 2 bxc3 bxc2 (2...♔c4 3 ♔b2) 3 ♔b2 ♔e5 4 ♔xc2 ♔f5 5 ♔d3 ♔g5 6 ♔d4 ♔xh5 7 ♔d5 ♔g5 8 ♔xd6 and both sides promote at the same time.

1...♔e6

1...♔e5 2 ♘d7+ ♔e6 3 ♘f8+ ♔f7 4 c3! bxc3 5 bxc3 ♔xf8 6 ♔b2 is a comfortable draw.

2 c3! bxc3

After 2...♔xf6 3 cxb4 ♔e5 4 ♔b1 ♔d5 5 ♔c1 ♔c4 6 ♔d2 ♔xb4 7 ♔d3 White is just in time to draw.

3 ♘e4 c2

It looks hopeless, but now White reveals the point of his play.

4 ♘c5+!

Black must take or else White plays ♘xb3, but now White is stalemated.

4...dxc5 ½-½

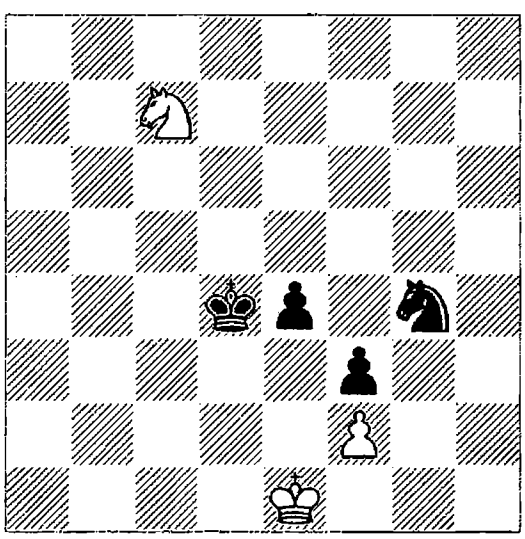
Summary:

- Tactical ideas such as mate and stalemate are unusual in single-knight endings, but they do occur occasionally. Staying alert will give you a better chance of spotting them when they do arise.

3.6 Knight + Pawn vs Knight

Now we move on to positions in which both sides have a knight. The most basic of these is knight and pawn vs knight. This ending is almost always drawn when the defender's king can get in front of the pawn, but there are a few exceptions, as in the following example. This position was incorrectly analysed by Averbakh, and his faulty analysis has been reproduced several times, notably in the *Encyclopaedia of Chess Endings* and *Van Perlo's Endgame Tactics*. As so often in such cases, failure to realize that a particular position is reciprocal zugzwang lies at the root of the mistaken analysis.

B



Goldenov – Kan
USSR 1946

The position is drawn, but Black can still set a nasty trap.

1...e3!? 2 fxe3+?

Not a mistake according to Van Perlo, who faithfully copies Averbakh's analysis. But you should not necessarily trust famous names, because Averbakh is wrong and this is a losing move. Van Perlo's incorrect analysis is a surprise, as the ♘+♙ vs ♘+♙ tablebase, which was available at the time the book was published, reveals the mistake at once. Even without the tablebase, *Fritz* points out the error in less than a second. 2 ♘e6+! is the only move to draw since after 2...♔e5 (2...♔d3 3 ♘f4+ ♔e4 4 fxe3 ♔xe3 5 ♘d5+ draws) 3 ♘g5 exf2+ (3...♔f4 4 ♘h3+ is simpler) 4 ♔f1 ♔f4 5 ♘xf3! ♔xf3 (5...♔g3 6 ♔e2 is also drawn) White is stalemated.

2...♔e4!

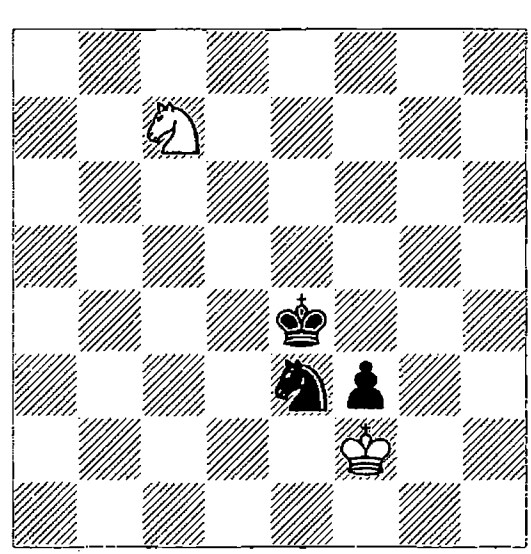
It is quite easy to understand how White overlooked this beautiful move (2...♔xe3? 3 ♘d5+ is a draw at once), which gives rise to a position of reciprocal zugzwang. White is to play, so Black has a winning position.

3 ♔f1

If the knight moves, then there is no check on d5 and so Black wins with ...♔xe3. Other king moves also lose; e.g., 3 ♔d2 ♘xe3 4 ♔e1 ♘g4 5 ♔d2 f2 6 ♔e2 ♔f4 7 ♘d5+ ♔g3 and another reciprocal zugzwang seals White's fate.

3...♘xe3+ 4 ♔f2 *(D)*

B



4...♘d1+?

But this move, not commented on by either Averbakh or Van Perlo, is a serious error which should have thrown away the win. The crucial position arises after 4...♘g4+! 5 ♔g3 (5 ♔f1 f2 6 ♔e2 ♔f4 and Black wins as before) 5...f2 6 ♔g2. If White were to play, then he would lose

at once as 7 ♘e6 would be met by 7...♔e3, while 7 ♔f1 leads to mate by Black after 7...♔f3 or 7...♔e3 8 ♘d5+ ♔f3. Therefore Black must find a move that maintains the *status quo*, the crucial factors being that he must keep the white knight out of d5, while retaining the possibility of ...♔e3. Only one move works, the remarkable 6...♔d4!!, when White loses as above.

5 ♔e1?

This final mistake seals White's fate. As Averbakh and Van Perlo point out, 5 ♔g3! would have drawn: 5...f2 (5...♔e3 6 ♘d5+) 6 ♔g2 ♔d4 7 ♔f1 ♔e3 8 ♘b5! (this is the point; on g4 the knight has access to h2, but from d1 the only dangerous square is e3, which is blocked by Black's king) 8...♔f3 9 ♘d4+ and White is safe.

5 ♔g1? is also wrong and loses after 5...♔f4! 6 ♘d5+ ♔g3 7 ♔f1 f2 8 ♔e2 ♘c3+! 9 ♘xc3 ♔g2.

5...f2+ 6 ♔e2

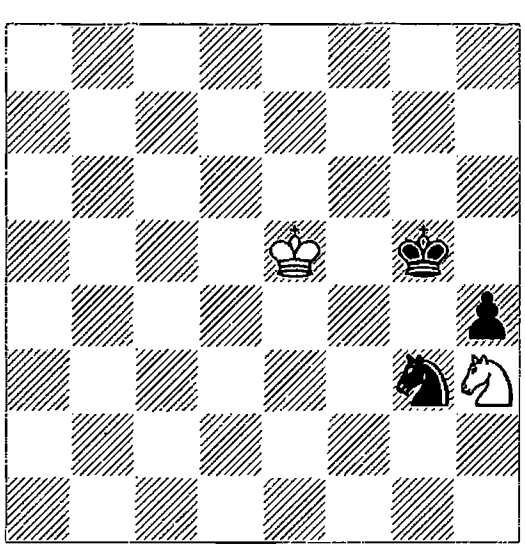
Or 6 ♔f1 ♔f3 7 ♘d5 ♘e3+ 8 ♘xe3 ♔xe3 and Black wins.

6...♔f4 0-1

Black wins, as there is no defence to the threat of ...♔g3 followed by either ...♔g2 or ...♘e3.

Normally there are only winning chances when the defender's king cannot move in front of the pawn. The theory of this ending is quite involved, but the basic ideas are not complex. The attacker has the best chances with a rook's pawn, and in this case most positions with an advanced pawn supported by the king are won.

B



Krogius – W. Rosen
World Seniors Ch, Bad Liebenzell 1995

In this example Black sacrifices his knight four times in different variations.

1...♔g4 2 ♘g1

The alternatives are:

1) 2 ♘f2+ ♔f3 3 ♘h3 ♘e2 and now:

1a) 4 ♔f5 ♘d4+ 5 ♔g5 ♔g3 6 ♘f4 (6 ♘g1 ♘f3+! is the first sacrifice, which wins after 7 ♘xf3 h3!) 6...♘e6+! (the second sacrifice) 7 ♘xe6 h3 and Black wins.

1b) 4 ♘g5+ ♔g4 5 ♘e4 ♘g1 6 ♔d4 (6 ♘f2+ ♔f3 7 ♘e4 ♔g2 is similar) 6...♔f4 7 ♘f2 ♔f3 8 ♘e4 ♔g2 9 ♘f6 h3 10 ♘g4 ♔g3 11 ♘e3 ♔f3 12 ♘f1 ♔e2 13 ♘g3+ ♔f2 and the pawn advances.

2) 2 ♘f4 ♘e2! (the third sacrifice) 3 ♘d3 ♔g3 and Black wins.

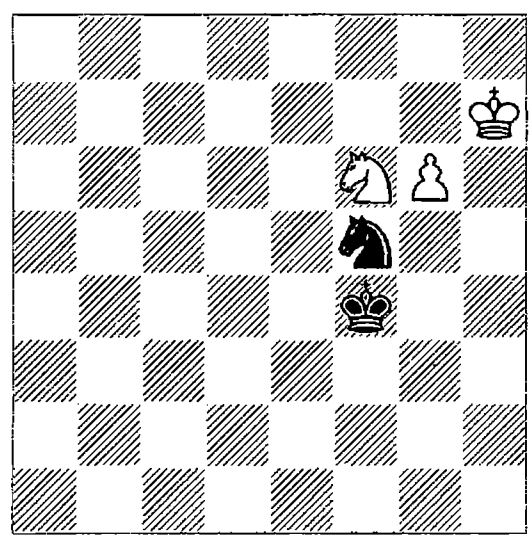
2...♘e2!

The only winning move and the fourth sacrifice.

3 ♘xe2 h3 4 ♘c3 h2 5 ♘e4 ♔f3 6 ♘d2+ ♔g2 0-1

The defender has more chances against a knight's pawn and if the knight can stop the pawn on the sixth rank, with the defender's king reasonably close, then the result is often a draw. However, even theoretically drawn positions may be awkward to defend in practice, as the following example demonstrates.

W



R. Bellin – Padevsky
Albena 1979

Contrary to Minev's notes in *Informator 28*, this position is a draw. Black's knight is holding up the pawn and keeping the white king away.

With his king also actively placed in the centre of the board, Black should have no trouble holding the position.

1 ♘d5+ ♔e5

Black should avoid playing his king to a square which allows White to promote with check; for example, 1...♔g5? loses to 2 ♘e3 (forcing the pawn forward to g7) 2...♘e7 3 g7 ♔f4 4 ♘c4 (not 4 ♘d5+? ♘xd5) 4...♔e4 5 ♘b6 ♔f5 6 ♔h8 (threatening ♘c8) 6...♘g6+ 7 ♔g8 ♔e6 8 ♘c8.

2 ♘b4

When White cannot promote with check, 2 ♘e3 allows 2...♘xe3 3 g7 ♘d5, drawing at once.

2...♔e4

Minev thought that 2...♘d6 loses, but it also draws after 3 ♘c6+ ♔f4 (3...♔f5? loses to 4 ♘e7+, as White wins after 4...♔e4 5 ♔g7 ♔e5 6 ♔f8 or 4...♔e5 5 ♔g7! ♔e6 6 ♔f8 ♘e4 7 g7 ♘f6 8 ♘g6 ♘d7+ 9 ♔g8 ♘f6+ 10 ♔h8 ♔f7 11 ♘e5+ ♔e6 12 ♘g4) 4 ♘e7 (4 g7 ♘e8 also draws) 4...♘e8! 5 ♔g8 ♘f6+ (5...♔g5? loses to 6 ♔f8 ♘f6 7 g7) 6 ♔f7 ♘h5 and Black has set up a new defensive formation.

3 ♘c6 ♔d5 4 ♘d8

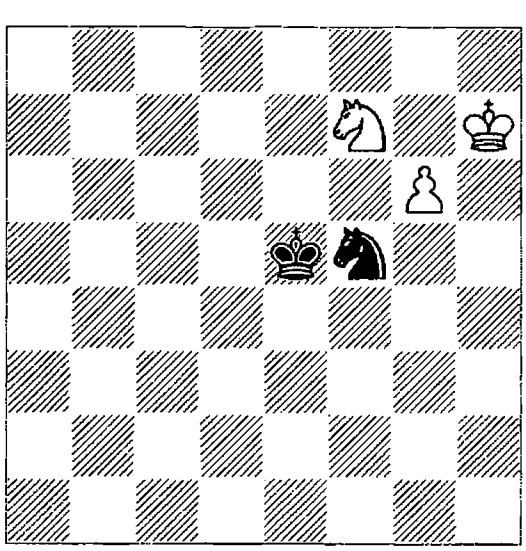
White manoeuvres around, hoping to induce a mistake by Black.

4...♔e5

Wisely moving his king back to a square that does not allow White to promote with check. 4...♘d6? loses to 5 g7 for precisely that reason.

5 ♘f7+ *(D)*

B



5...♔e6?

Black makes a losing blunder, playing his king to a bad square. 5...♔f4 was a good defence (5...♔e4 and 5...♔d4 draw as well), since after 6 ♘h6 ♘d6 White cannot advance the pawn due to 7 g7 ♘e8.

6 ♘h6

Black no longer has the ...♘d6 defence because the pawn can promote with check, so he cannot prevent the pawn from advancing to the seventh rank, after which White has a winning position.

6...♘e7 7 g7 ♔e5 8 ♘g4+

White plays his knight round to dislodge Black's knight from e7.

8...♔f5 9 ♘e3+ ♔e6 10 ♘g2!

Heading for g6.

10...♔f7

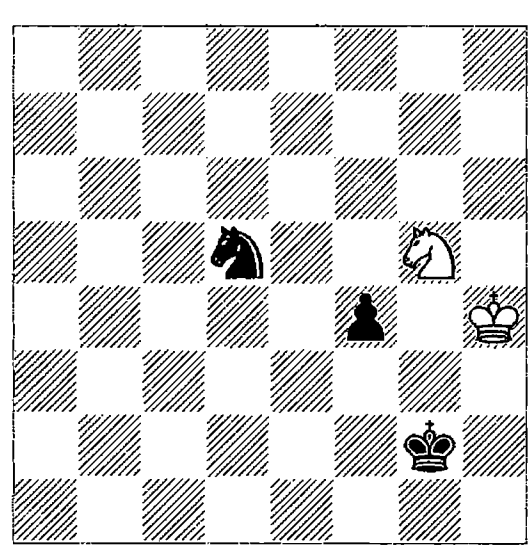
Or 10...♔f5 11 ♘h4+ ♔f6 12 ♘g6 and the pawn promotes.

11 ♘f4 1-0

After 11...♘g8 (11...♔f6 12 ♘d5+) 12 ♘d5 Black is in zugzwang.

The following example features a bishop's pawn on the sixth rank, which should also be a draw provided it is firmly blockaded.

B



Pe. Jirovsky – Tolstikh
Česke Budejovice 1995

Black won the game and Tolstikh's annotations incorrectly indicated that the diagram position is already winning for Black. Actually the position remains drawn for the next few moves, until White makes a fatal error.

1...♘f6!

The best winning chance, since White's king cannot move and so White must allow the pawn to advance to the sixth rank. However, by itself this is not enough to guarantee a win.

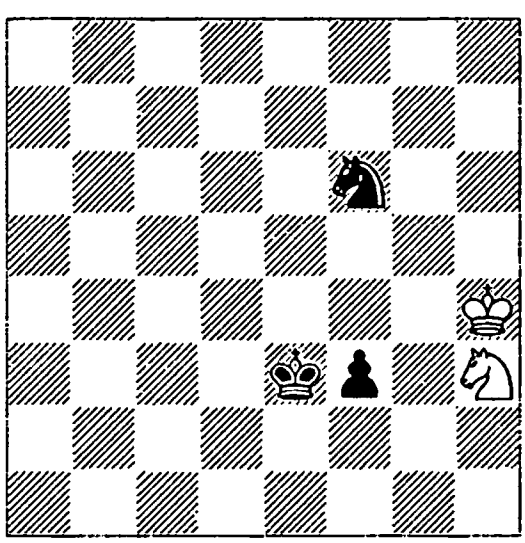
2 ♘h3 f3 3 ♘f4+ ♔f2 4 ♘h3+?

Up to this point White has defended accurately but now makes a serious error. White's knight is not well posted on the edge of the board and even though he gets his king to g3, White still loses. 4 ♘e6? is also wrong and loses after 4...♔e3! (4...♔g1? 5 ♘g5 and 4...♔e1? 5 ♘f4 are only draws) since now the pawn can advance to f2; for example, 5 ♘g7 f2 6 ♘f5+ ♔f3 7 ♘g3 ♔g2 8 ♘f5 ♘d5 9 ♘g3 ♘e3 and White is in zugzwang.

4 ♔h3! is the drawing move, improving the position of the white king without getting the knight trapped on a bad square. After 4...♘e4 5 ♔h2 or 4...♔e3 5 ♘g2+! ♔e2 6 ♘f4+ Black cannot make progress.

4...♔e3 *(D)*

W



Now Black is winning.

5 ♔g3

Or 5 ♔g5 ♘e4+ 6 ♔f5 ♘g3+ 7 ♔e5 ♘e2 8 ♔f5 ♘g1! and a typical knight sacrifice ensures the pawn's promotion.

5...♘e4+ 6 ♔h2

Black wins after 6 ♔h4 ♘c3 7 ♔g5 ♘e2 followed by ...♘g1.

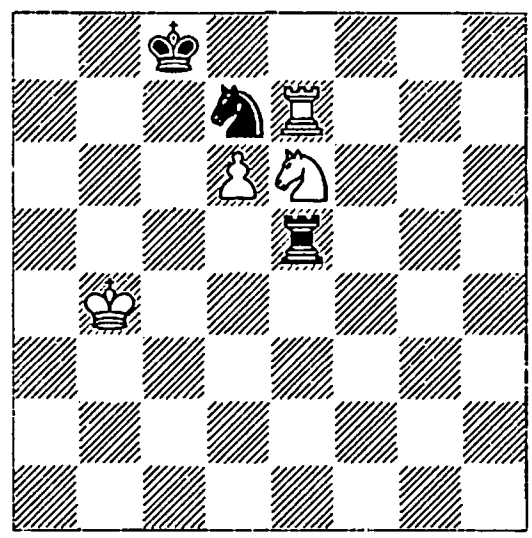
6...♘f2!

The only move to win. 6...♘g5? allows White to escape by 7 ♘g1 f2 8 ♔g2 reaching a reciprocal zugzwang with Black to play.

7 ♘g1 ♘g4+ 8 ♔h1 f2 9 ♔g2 ♘h2! 0-1

Our final example with ♘+♙ vs ♘ features a central pawn on the seventh rank. This situation is often a win, but in this case some subtlety is required in order to ensure that a reciprocal zugzwang arises with Black to play.

W



G. Camacho – Corrales Jimenez
Cuba (rapid) 2006

White is a pawn up, but with only one pawn on the board this would normally be insufficient to win. However, White can force the exchange of rooks and so reach a knight ending which he can win thanks to a reciprocal zugzwang.

1 ♘f8!

Attacking both d7 and e5.

1...♖xe7

The only move, as 1...♘xf8 2 ♖xe5 ♔d7 3 ♔c5 is an easy win since 3...♘e6+ may be met by 4 ♖xe6 ♔xe6 5 ♔c6.

2 dxe7 ♘f6

The critical moment. White must choose the correct square for his king.

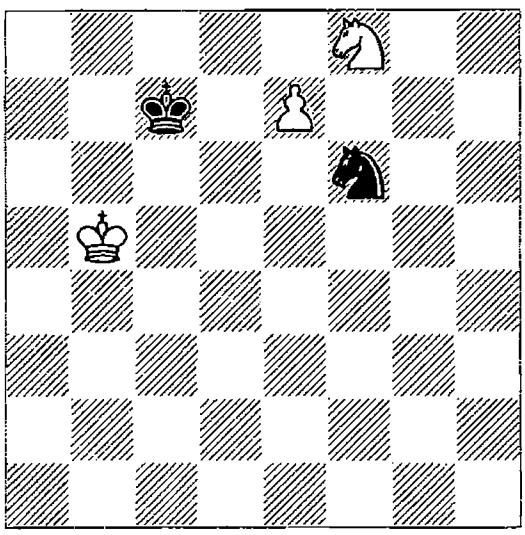
3 ♔b5!

Not 3 ♔c5? ♔c7! and it is White to play in the reciprocal zugzwang; any king move allows ...♔d6, while a knight move permits ...♔d7, so it's a draw. The only other move to win is 3 ♔c4!, which again aims to lose a tempo.

3...♔c7 *(D)*

3...♔b7 is a cunning move, hoping for 4 ♔c5? ♔c7 but White wins with 4 ♘e6! ♘e4 5 ♔c4 ♘f6 6 ♔c5! ♘e8 7 ♔d5 ♔b6 8 ♘d4 ♔c7 9 ♔e6 ♔b6 10 ♔d7 ♘f6+ 11 ♔d8 ♔c5 12 ♘e6+ ♔d6 13 ♘f8 followed by ♘d7.

W



4 ♔c5!

Now it is Black to play in the reciprocal zugzwang.

4...♘e8

Black had no choice but to allow the white king access to d5. 4...♘d7+ 5 ♔d5 ♘f6+ 6 ♔e6 ♘e8 only makes it easier for White; for example, 7 ♘g6 ♔c6 8 ♔f7 ♘c7 9 ♘f4 followed by ♘e6, winning.

5 ♔d5 ♘f6+

Or:

1) 5...♘g7 6 ♔e5 ♘e8 7 ♔e6 ♔c6 8 ♘g6 ♘c7+ 9 ♔f7 ♔d5 10 ♘f4+ ♔e5 11 ♘e6 ♘b5 12 ♔f8 ♘d6 13 ♘d8 and White will win with ♘b7.

2) 5...♘d6 6 ♔e6 ♔c6 7 ♘g6 ♔c5 8 ♔d7 ♔d5 9 ♘f4+ ♔c5 (9...♔e5 10 ♘h3 ♔d5 11 ♘g5 and ♘f7 wins) 10 ♘e6+ ♔d5 11 ♘g5 and again ♘f7 will be decisive.

6 ♔e6 ♘e8 7 ♘g6 ♔c6 8 ♔f7 1-0

After 8...♘c7 9 ♘f4 followed by ♘e6 White promotes the pawn.

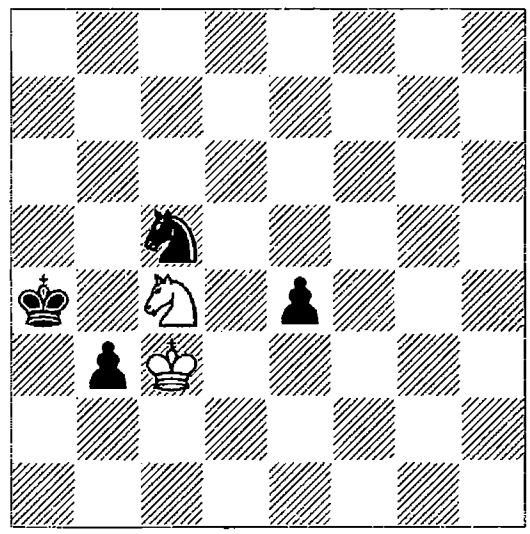
Summary:

- ♘+♙ vs ♘ is generally drawn if the defender's king is in front of the pawn, but there are a few exceptional positions when the pawn is on the sixth or seventh rank.
- If the defender's king cannot move in front of the pawn, the attacker has best chances with a rook's pawn. If the attacker has an advanced rook's pawn supported by his king then he usually wins.
- Positions with a knight's pawn are next best, but if the defender can blockade the pawn on the sixth rank with his king in a good position, then he often draws.
- Bishop's pawns and centre pawns offer fewer chances and here the attacker needs a more favourable position to win.

3.7 Knight + Two Pawns vs Knight

A knight and two (non-doubled) pawns generally win against a knight, but there can be difficulties if the pawns are weak, or the attacker suffers from poor piece coordination.

B



Sotolongo – F. Ramirez
Moron 1994

Here Black faces considerable difficulties in capitalizing on his material advantage. White's pieces are actively placed, whereas Black's king is stuck on the edge of the board and is tied down to defending the b3-pawn. Despite these difficulties, the position is winning for Black. Nogueiras incorrectly claimed in *Informator 61* that Black's very first move threw away the win, but the position remained winning for Black for two more moves before he allowed White to escape with a draw.

1...♘d3

In order to win, Black must give up one of his pawns, but the follow-up needs to be accurate or the sacrifice will be in vain. This move maintains the win, but it would have been simpler to continue 1...♘b7!, which puts White in zugzwang. The main line runs 2 ♘d2 (after 2

♔b2 ♔b4 3 ♘d2 ♘c5 Black defends both pawns and wins) 2...♘a5 3 ♘xe4 (3 ♘b1 e3 4 ♔d3 b2 5 ♔xe3 ♔b3 6 ♔d2 ♔a2 7 ♔c2 ♘c6 8 ♘c3+ ♔a1 9 ♔b3 ♘d4+ 10 ♔c4 ♘e2 and Black wins) 3...♔a3 4 ♔d4 (4 ♔d2 b2 5 ♘c3 ♔b3 6 ♔d3 ♘c6 7 ♘b1 ♘b4+ 8 ♔e2 ♔a2 9 ♘d2 ♘c2 10 ♔d3 ♘a1 11 ♔c4 ♘b3 12 ♘e4 ♔a1 13 ♘c3 ♘c1 followed by ...♘a2 promotes the pawn, while 4 ♘d2 b2 5 ♔c2 ♔a2 6 ♘b1 ♘c6 transposes to the previous bracket) 4...b2 5 ♘c3 ♔b4! 6 ♘b1 (or 6 ♔d3 ♔b3 7 ♔d2 ♘c4+ 8 ♔d3 ♘a3 9 ♔d2 ♘b5! 10 ♘b1 ♔a2 and Black wins) 6...♔b3 7 ♘d2+ ♔c2 8 ♔e3 ♔c1 9 ♔d3 ♘c4! 10 ♘b3+ ♔d1 and the b-pawn promotes.

2 ♘d2

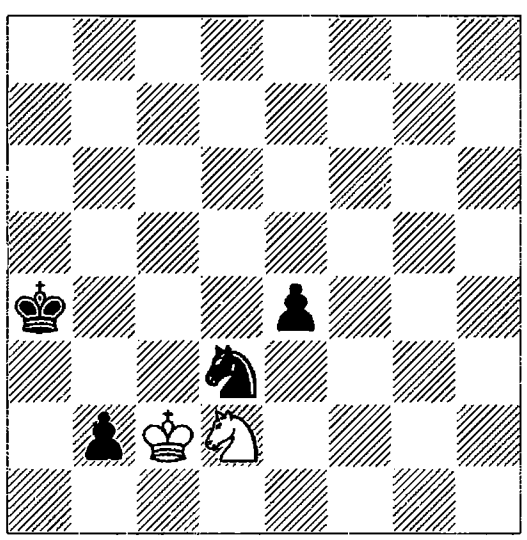
The alternative is 2 ♘b6+ ♔a3 3 ♘c4+ ♔a2 4 ♔d4 ♘b4 5 ♔xe4 ♘c6 6 ♔e3 ♘e5 7 ♘b6 ♔a3! 8 ♘d5 b2 9 ♘c3 ♔b3 10 ♘b1 ♔c2 11 ♘a3+ ♔c1 12 ♔d4 ♘f3+ 13 ♔d3 ♘e1+ followed by ...♘c2 and Black wins.

2...b2

This is the correct pawn to push. 2...e3? only draws after 3 ♘xb3 e2 4 ♘c5+! ♘xc5 5 ♔d2.

3 ♔c2 *(D)*

B



3...e3?

This was the move which threw away the win. Victory was still possible by 3...♔a3! (the only move to win) 4 ♘xe4 ♘b4+ 5 ♔b1 ♘d5! (the first of several positions of reciprocal zugzwang in this line) 6 ♘d2 (6 ♔c2 loses more quickly after 6...♔a2 7 ♘d2 ♘e3+ 8 ♔c3 ♘f1) 6...♘e3 7 ♘b3 (7 ♘e4 ♘c4 8 ♔c2 ♔a2 9 ♘c3+ ♔a1 10 ♔d3 ♘a3 and ...♘b5 wins) 7...♘c4 8 ♔c2 ♘e5! (Nogueiras only analysed 8...♔a2?, which allows an immediate draw by 9 ♘c1+! ♔a3 10 ♘d3) 9 ♘d2 (White loses immediately after 9 ♘c1 ♘f3 10 ♘d3 ♘e1+ or 9 ♔b1 ♘f3 10 ♔c2 ♘d4+) 9...♔a2 10 ♘b1 ♘c6 11 ♘c3+ (or 11 ♘d2 ♘d4+ 12 ♔c3 ♘f3) 11...♔a1 12 ♔b3 ♘d4+ 13 ♔c4 ♘e2 and the b-pawn cannot be stopped.

4 ♘b1!

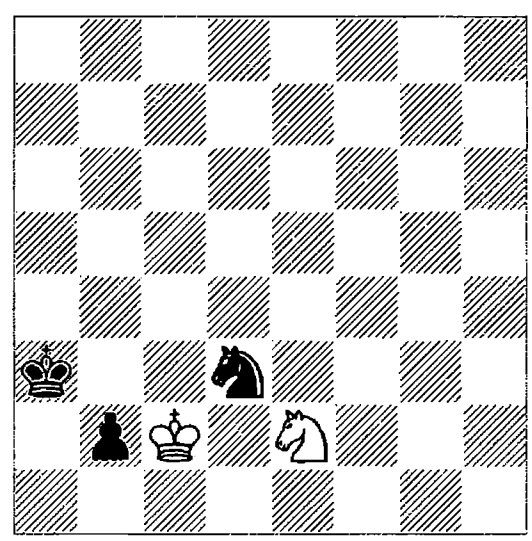
White takes his chance and forces Black to give up a pawn in unfavourable circumstances.

4...e2

4...♘c5 5 ♔xb2 ♔b4 6 ♔c2 ♔c4 7 ♘a3+ ♔d4 8 ♘b5+ ♔e4 9 ♘c3+ is also drawn.

5 ♘c3+ ♔a3 6 ♘xe2 *(D)*

B



6...♘b4+

6...♘c5 7 ♘c1! is a reciprocal zugzwang with Black to play; he must move his knight and then ♘d3 draws.

7 ♔b1 ♘d5 8 ♔c2 ♔a2

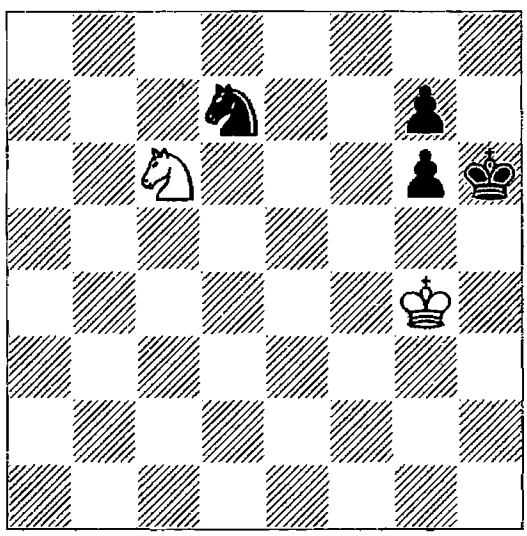
8...♘e3+ 9 ♔b1 doesn't help.

9 ♘c1+! ♔a3 10 ♘d3 ½-½

The endgame of ♘ + doubled pawn vs ♘ has been sadly neglected. You can search in *Basic Chess Endings*, Averbakh's series and *Fundamental Chess Endings* without finding a single example of it. The *Encyclopaedia of Chess Endings* gives two rather similar examples, one of which ends as a win and the other as a draw, with no improvements suggested in either position, which is fairly confusing. I shall attempt to clarify matters a little. If the pawns are on a rook's file, then the general result is a draw.

Having the pawns on the knight's file is the worst case for the defender and in this case the general result is a win for the attacker. With bishop's pawns or central pawns, the situation is less clear because winning and drawing positions appear more or less equally divided.

W



Matulović – Uitumen
Palma de Mallorca Interzonal 1970

We know from the above comments about knight's pawns that this is a very bad case for the defender and it is indeed lost for White. However, in the game something surprising happened.

1 ♘e7

1 ♘d4 is a more resilient defence, but after 1...♘f6+ 2 ♔h4 g5+ 3 ♔g3 ♔g6 Black extracts his king from the edge of the board and we are in a 'general win' situation. However, this does not imply that the win is necessarily easy. The following main line shows that quite a lot of work is required to make progress: 4 ♘e6 ♘g8 5 ♔g4 ♘h6+ 6 ♔g3 ♔f6 7 ♘c7 ♔f7 (odd king moves and obscure triangulations seem to be a feature of this ending) 8 ♔f3 ♘f5 9 ♔g4 ♔f6 10 ♔h5 ♘g3+ 11 ♔g4 ♘e4 12 ♘b5 ♔g6 13 ♘d4 ♘f6+ 14 ♔g3 ♘d5 15 ♘e6 ♔f6 16 ♘c5 ♘e3 17 ♔f3 ♘f5 18 ♘e4+ ♔g6 19 ♔g4 ♘h6+ 20 ♔h3 ♔f5 21 ♘g3+ ♔f6 22 ♘e4+ ♔g6 23 ♔g3 ♔h5 24 ♘d6 g6 25 ♘c4 g4 26 ♘e5 ♔g5 and by now it is clear that Black is pushing White back.

1...♘f6+ 2 ♔h4 g5+ 3 ♔g3

Now a normal continuation would be 3...♔h5 4 ♘f5 ♘e8 5 ♔h3 g4+ 6 ♔g3 ♔g5 7 ♘d4 ♘c7 8 ♘c6 ♘d5 9 ♘d8 ♔f5 10 ♘b7 ♘e3 11 ♘c5 g6 12 ♘d3 ♘d5 13 ♘c5 ♘f4 14 ♘d7 ♘e6 15 ♘b8 ♘c5 16 ♘c6 ♘e4+ 17 ♔g2 ♔f4 and White is in retreat.

3...g6?

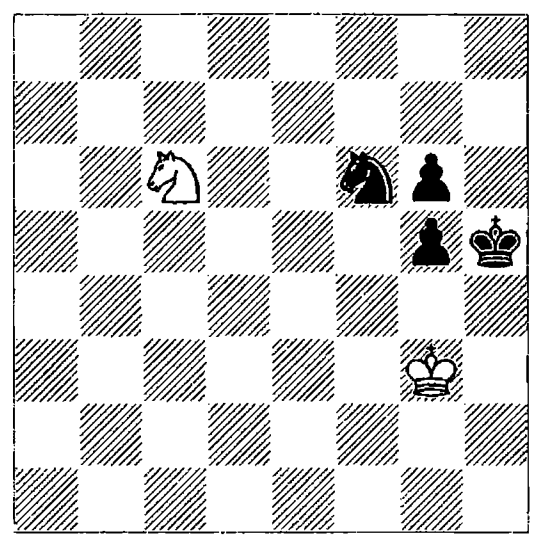
This throws away the win as Black should not bottle his king up on the h-file. The resulting position is one of the few cases in which the doubled g-pawns do not win.

4 ♘c6!

White responds well. The basic drawing idea is to transfer the knight to f7.

4...♔h5 *(D)*

W



5 ♘d4?

The wrong direction. White could have held the game by 5 ♘e5! (the only move to draw) 5...g4 6 ♘f7 ♘d7 7 ♘d8! (again the only move) 7...♘c5 8 ♘f7! ♘d3 (or 8...♘e4+ 9 ♔f4) 9 ♘d8 ♘c1 10 ♘f7 ♘e2+ 11 ♔f2 ♘d4 12 ♔g3 ♘f5+ 13 ♔f4 g3 (otherwise Black cannot make progress, but now the advanced g-pawn becomes weak) 14 ♘e5 g2 15 ♘f3 ♘h4 16 ♘g1, drawing.

5...♘e4+ 6 ♔f3 ♘d6 7 ♔g2 ♘f5 8 ♘e6 g4

Now Black is back on track and rest is relatively simple.

9 ♘f4+ ♔g5 10 ♘e6+ ♔h4 11 ♘f4 ♘e7 12 ♘e2 ♘d5 13 ♔h2 g5 14 ♘g3 ♘e3! 15 ♘e4 ♘f5 16 ♔g2 g3 17 ♘f6 ♘e3+ 18 ♔g1 ♘g4 19 ♘h7

If White centralizes his knight with 19 ♘e4, then Black wins by 19...♘f2 20 ♘d2 ♘h3+ 21 ♔h1 ♔g4 22 ♘f3 ♘f4 23 ♘g1 ♘d5 24 ♔g2 ♘e3+ 25 ♔h1 ♔f4 26 ♘h3+ ♔f5 27 ♘g1 ♔g4

28 ♘e2 ♔f3 29 ♘c3 ♘g4 30 ♔g1 ♘f2 followed by ...♘h3+.

19...♘e5 20 ♔g2 ♘d3 21 ♔g1 ♘f4 22 ♔h1 g2+ 23 ♔h2 g4 24 ♘f6 g3+ 25 ♔g1 ♔h3 0-1

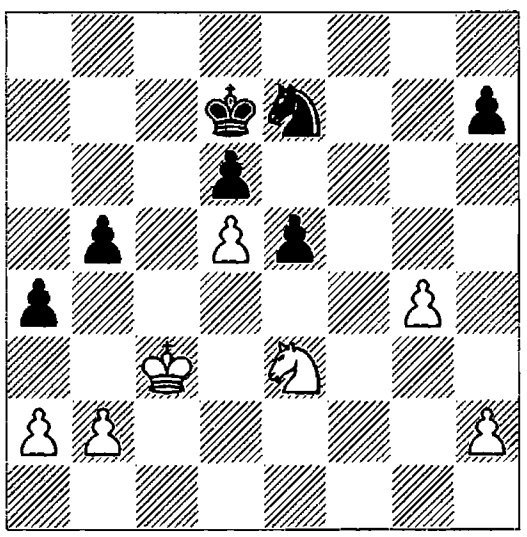
Summary:

- ♘ + two non-doubled pawns vs ♘ is generally a win, but there can be problems if the pawns are weak or the attacker's pieces are badly placed.
- ♘ + doubled pawn vs ♘ is generally drawn with rook's pawns and generally won with knight's pawns. Positions involving bishop's pawns and centre pawns are evenly divided between wins and draws, so in this case it makes little sense to talk of a 'general result'.

3.8 The Outside Passed Pawn

Outside passed pawns are an advantage in virtually any ending, but because the knight lacks any long-range ability they are especially effective in knight endings. An outside passed pawn often has to be held up by the enemy's knight, leaving him effectively a piece down on the other side of the board. In favourable cases, an outside passed pawn can confer a decisive advantage all by itself.

B



Kramnik – Shirov
Tal Memorial, Moscow 2007

White has a kingside majority which can produce an outside passed pawn, and he has the additional advantage that he is threatening to attack Black's weak queenside pawns by ♔b4. This latter threat means that Black must keep his king on the queenside, leaving his knight to cope with White's kingside pawns. It is interesting to note that Black's protected passed e-pawn has little value for two reasons. The first is that if it advances, White's king is close enough to stop it. The second is that White's knight can operate effectively on the kingside while at the same time controlling a square on the e-file and so preventing the advance of the e-pawn.

1...♔c7

This is forced, or else White wins the queenside pawns by ♔b4.

2 g5 ♔b6

Threatening ...♔c5, which White immediately takes steps to prevent.

3 b4!

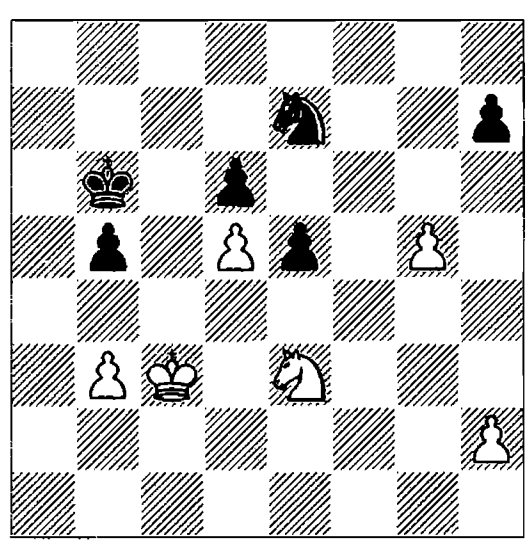
A strong move. If Black leaves the pawn on b4 then his king is locked out of play, but if he exchanges on b3 then there are fewer pawns on the queenside and hence fewer possibilities for Black to develop counterplay there.

3...axb3

The alternative is 3...♘g6, but then 4 ♔d3! (4 ♘g4?! ♘f4 5 ♘f6 ♔c7! is less clear) 4...♘f4+ 5 ♔e4 ♔c7 (5...a3 6 h4 is very strong) 6 ♔f5 ♔d7 7 ♔f6 ♘h3 8 ♘d1 e4 9 ♔f5 ♔e7 10 ♔xe4 ♘xg5+ 11 ♔f4 ♘f7 12 ♘c3 ♘e5 13 ♔e4 wins the b5-pawn and gives White an extra passed pawn on the queenside.

4 axb3 *(D)*

B



4...♔a5

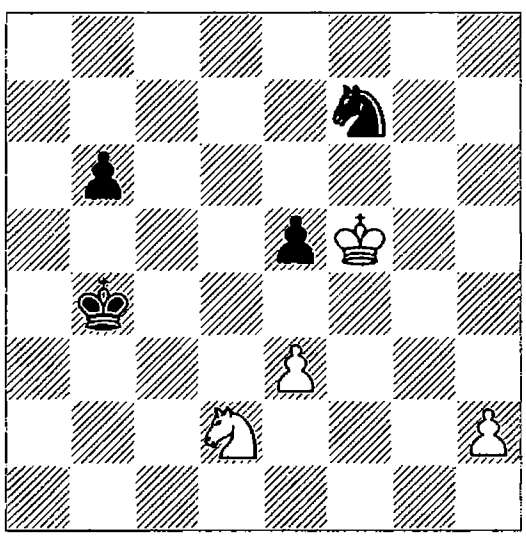
Now 4...♘g6 is best met by 5 ♘g4! ♔c5 (5...♘f4 6 ♘f6 ♔c7 7 h4 ♔d8 8 ♔b4 also wins for White) 6 ♘f6 b4+ (6...e4 7 b4+ ♔b6 8 ♔d4 is hopeless for Black) 7 ♔d3 ♘f4+ 8 ♔e4 ♘e2 9 ♘xh7 with a winning position; for example, 9...♘c3+ 10 ♔f5 ♘xd5 11 ♘f6 ♘e7+ 12 ♔e6 ♘g6 13 ♘e4+ ♔d4 14 ♘xd6 e4 15 ♔f6 and White's pawns are decisive.

5 h4 ♘g6 6 h5 ♘f4 7 g6 hxg6 8 h6 g5 9 h7 ♘g6 10 ♔d3 1-0

After 10...♔b4 11 ♔e4 ♔xb3 12 ♔f5 ♘h8 13 ♔f6 ♔c3 14 ♔g7 b4 15 ♔xh8 b3 16 ♔g7 b2 17 ♘d1+ ♔c2 18 ♘xb2 White wins comfortably.

In the following position, both sides have outside passed pawns, but as we shall see White is the only one with winning chances.

W



Hübner – Ftačnik
Polanica Zdroj 1995

White has the advantage because knights are especially helpless against rook's pawns; Black's knight, which can be chased away by White's king, will struggle to hold up the h-pawn. In the game Black was unable to find a satisfactory defence, and Ftačnik's notes indicated that the diagram position is winning for White. However, Black does have a way to save the game. This position is a typical example of how 'annotation by result' often leads to chess blindness. Believing the position to be winning for White, Ftačnik incorrectly assessed several variations as winning even when a simple draw was available.

1 ♔g6!

Attacking the knight and at the same time preventing it from moving to h6. Other moves do not offer realistic winning chances; for example, after 1 ♔f6?! ♘h6 2 ♔xe5 ♔c3 3 ♘e4+ ♔d3 4 ♔f4 b5 Black's b-pawn provides sufficient counterplay.

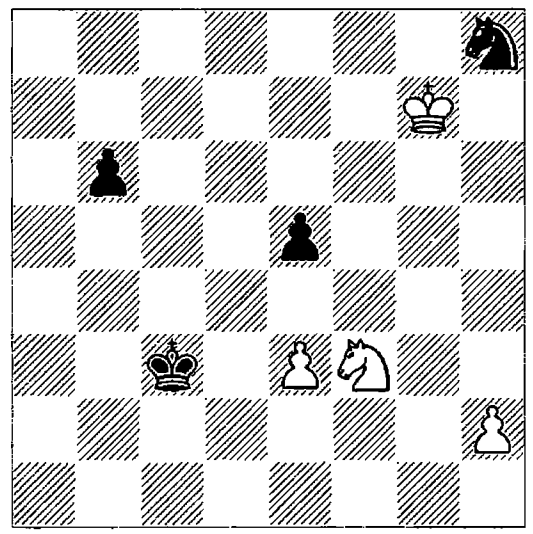
1...♘d8?

This is already a losing mistake. 1...♔c3? is also bad, due to 2 ♘b1+ ♔d3 (or 2...♔b2 3 ♔xf7 ♔xb1 4 h4 and Black's king blocks his pawn) 3 ♔xf7 ♔xe3 4 h4 ♔d3 5 h5 e4 6 h6 e3 7 ♘c3! ♔xc3 8 h7 and White promotes with check.

1...♘h8+! is the only route to survival. Black willingly allows his knight to be trapped on h8, because it takes White time to win it and then move the king out of the path of the h-pawn. In the meantime Black hopes to have developed counterplay by taking the e3-pawn and using his own two passed pawns. Play continues 2 ♔g7 ♔c3, and now:

1) 3 ♘f3 *(D)* gives Black various drawing options:

B



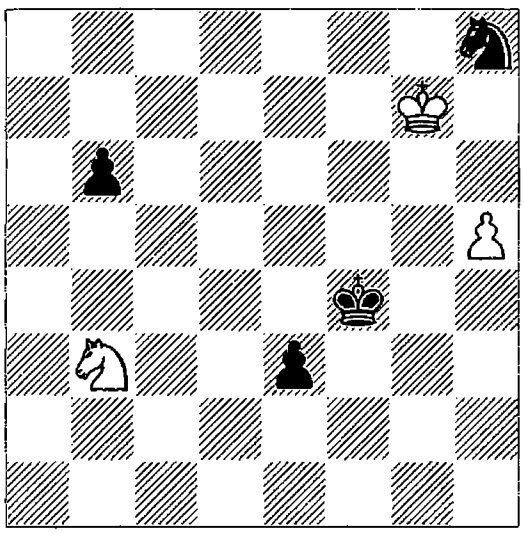
1a) 3...b5 4 ♘xe5 b4 5 ♘d7 ♔d3 6 h4 ♔xe3 7 h5 ♔f4 8 h6 ♔g5 9 ♘c5 ♘g6 10 h7 ♔h5 11 ♘b3 ♔g5 12 ♘d4 ♔h5 13 ♘e6 b3 14 ♘f4+ and Ftačnik stopped here with a 'winning for White' symbol, but in fact it's a draw: 14...♔g4 15 ♘d3 ♔g5 16 ♘b2 ♔h5 and White is not making progress.

1b) 3...♔d3 4 ♘xe5+ ♔xe3 5 h4 ♔e4! (Ftačnik's 5...♔f4? surprisingly loses to 6 ♔f6! b5 7 h5 b4 8 h6 b3 9 h7 ♔e4 10 ♘c4! ♔d4 11 ♘a3!

♔c3 12 ♔g7 ♔b2 13 ♘b5 ♔a2 14 ♔xh8 b2 15 ♘c3+ ♔b3 16 ♘b1 ♔c2 17 ♔g7, but not 6 ♔xh8? ♔xe5 7 ♔g7 b5, which is really a draw) 6 ♔f6 b5 7 h5 ♔d5! (7...b4? loses to 8 ♘c4! ♔d4 9 ♘a5) 8 h6 b4 9 h7 b3 10 ♘d3 ♔d4 11 ♘b2 ♔c3 12 ♘a4+ ♔b4 and Black draws.

1c) 3...e4 4 ♘d4 ♔d3 5 h4 ♔xe3 6 ♘b3 ♔f4 (6...♔f2 7 ♔xh8 e3 8 h5 e2 9 ♘c1 and now 9...b5! 10 h6 b4 11 h7 b3 is yet another draw, but not 9...e1♘? 10 ♔g7 ♘f3 11 ♔f6! and White wins, another example of the helplessness of a knight against a rook's pawn) 7 h5 e3 *(D)* and now:

W



1c1) 8 ♘d4 ♔e4 (8...b5 9 h6 b4 10 ♔xh8 b3 11 ♘xb3 e2 12 ♘c1 is another Ftačnik 'win', although 12...e1♕ 13 ♘d3+ ♔g5 draws at once) 9 ♘c2 ♔d3 10 ♘e1+ ♔e2 11 ♘g2 ♔f3 is again a draw.

1c2) 8 h6 b5! (8...e2? 9 ♘c1 e1♘ 10 ♔xh8 ♘f3 11 ♔g7 ♘g5 12 ♔g6! and White wins after 12...b5 13 ♘d3+ ♔g4 14 ♘f2+ ♔h4 15 ♘h3 or 12...♘e6 13 ♘d3+! ♔e4 14 ♔f6 ♘f8 15 ♘e5 b5 16 ♔f7 ♘h7 17 ♔g7 ♘g5 18 ♘f7 ♘e6+ 19 ♔g8 ♘f4 20 h7 ♘g6 21 ♔g7 ♔f5 22 ♘d6+ ♔g5 23 ♘xb5) 9 h7 ♔g5 10 ♘c1 b4 11 ♔xh8 b3 12 ♘xb3 e2 and Black saves the game. The fact that Black has several alternative routes to a draw shows that he is not in any real danger after 3 ♘f3.

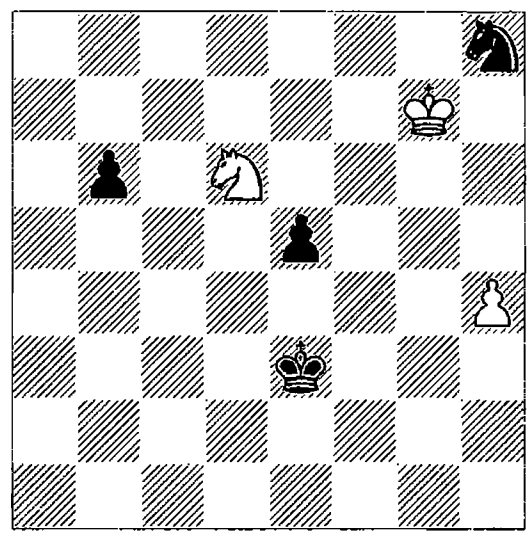
2) Against 3 ♘b1+, Ftačnik gave 3...♔d3 as losing and 3...♔b2 as drawing, but this is exactly the wrong way round:

2a) 3...♔b2? 4 ♔xh8 ♔xb1 5 h4 b5 6 h5 b4 7 h6 b3 8 h7 b2 9 ♔g7! (Ftačnik only considered 9 ♔g8? ♔c2 10 h8♕ b1♕ 11 ♕xe5 ♕a2+! 12 ♔g7 ♕a7+ 13 ♔f6 ♔d3, which is indeed a draw) and it doesn't matter where Black moves his king since White will always be able to force an exchange of queens on b1, after which e4 followed by ♔f6 wins.

2b) 3...♔d3! 4 h4 ♔xe3 5 h5 ♔d3! (this was the move Ftačnik missed; 5...♔f4? loses to 6 h6 ♔g5 7 h7 ♘g6 8 ♘c3 ♔f5 9 ♘d5 e4 10 ♘e7+) 6 ♔xh8 e4 with a simple draw.

3) 3 ♘e4+ (Ftačnik believed this was winning) 3...♔d3 4 ♘d6 ♔xe3 5 h4 *(D)*.

B



Now Ftačnik analysed 5...e4, 5...♔f4 and 5...b5, concluding that White can win against all three, whereas in reality they all lead to a draw:

3a) 5...e4 6 h5 b5! (6...♔f4? loses to 7 ♘xe4! ♔xe4 8 ♔xh8 as Black is skewered after both sides promote) 7 h6 (7 ♘xb5 ♔d3!) 7...b4 8 h7 b3 9 ♔xh8 ♔d3! (it is important to delay this move until the last possible moment to take the sting out of ♘xe4) 10 ♘xe4 b2 with a draw.

3b) 5...♔f4 6 h5 b5! (6...♔g5? 7 h6 ♘g6 8 h7 b5 9 ♘f7+ ♔f5 10 ♘xe5 does win for White) 7 h6 (7 ♘xb5 transposes to line 3c) 7...b4 8 ♔xh8 b3 9 ♘c4 e4 10 h7 e3 draws.

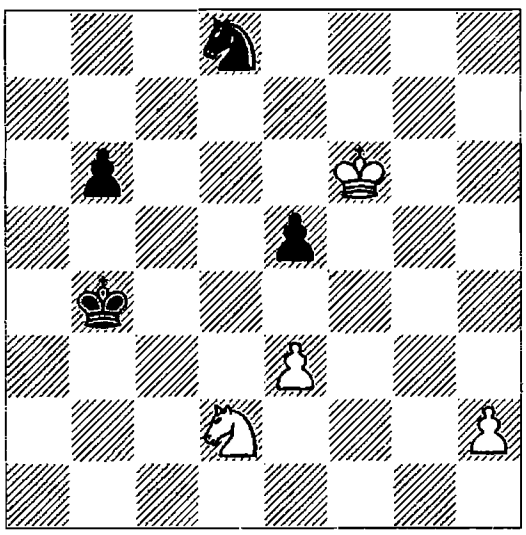
3c) 5...b5 6 ♘xb5 ♔f4 7 h5 with another branch:

3c1) 7...♔g5? 8 h6 e4 9 h7 e3 (9...♘g6 10 ♘d4 e3 11 ♘c2! transposes) and now Ftačnik's winning line 10 ♔xh8? e2 11 ♘d4 is another draw after 11...♔g6! 12 ♘xe2 ♔f7, but White does have a win by 10 ♘d4! ♘g6 11 ♘c2 e2 12 ♘d4 e1♘ 13 ♘e6+ ♔f5 14 ♘f8.

3c2) 7...♘f7! 8 ♔xf7 ♔g5 eliminates the pawn.

2 ♔f6! *(D)*

B



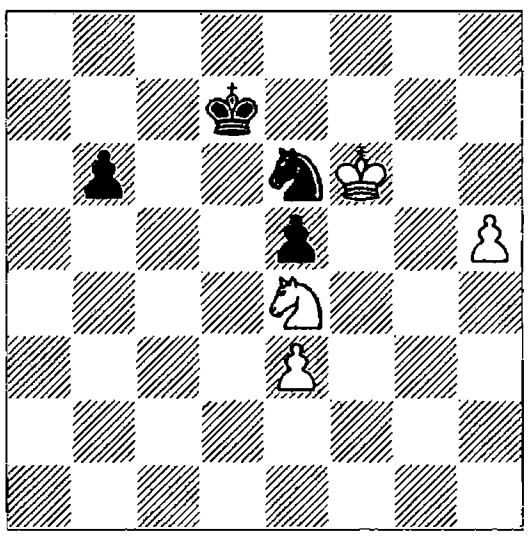
Even though the h-pawn is still on its starting square, Black's knight has no decent way to stop it.

2...♔c3 3 ♘b1+ ♔c4

3...♔c2 4 h4 ♔xb1 5 h5 b5 6 h6 b4 7 h7 b3 8 h8♕ b2 9 ♕xd8 is also an easy win for White.

4 h4 ♔d5 5 h5 ♘e6 6 ♘c3+ ♔d6 7 ♘e4+ ♔d7 *(D)*

W



8 h6 ♘f8

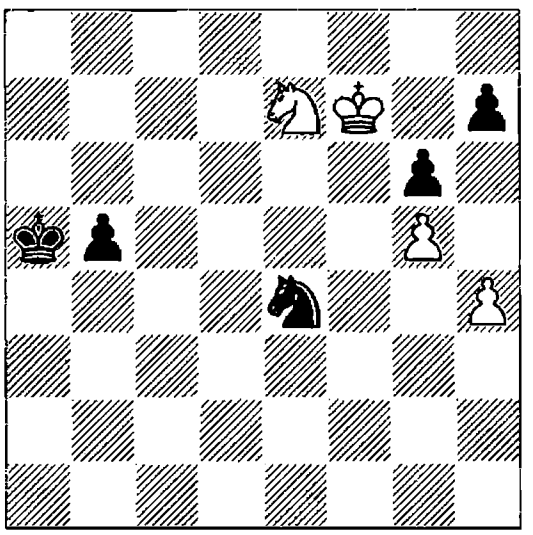
After an enormous effort, Black has just about managed to stop the h-pawn, but the cost in time has been huge and in any case it doesn't hold the pawn up for long.

9 ♔f7 1-0

After 9...♘h7, 10 ♔g7 traps the knight and wins.

If the outside passed pawn is supported by the king, the best defence is often to give up the knight for the passed pawn, and hope to draw by means of a counterattack against the pawns on the opposite wing.

B



Verat – Winants

French Team Ch, Fourmies 1998

Black has an extra outside passed pawn, but this may not be enough to decide the game since White's king is able to launch a counterattack against Black's kingside pawns. If White can give up his knight for the b-pawn while retaining his h4-pawn, then he will draw, but one danger for White is that Black will be able to answer ♔xh7 with ...♘xh4, after which Black can win by simply pushing the b-pawn to pick up White's knight. Black won the game and, according to the notes by Verat in *Informator 75*, the diagram position is already winning, but as we shall see White has a cunning defence which holds the game.

1...♔a4!?

The best winning try as 1...b4?! 2 ♘c6+ ♔b5 3 ♘xb4 ♔xb4 4 ♔g7 draws at once.

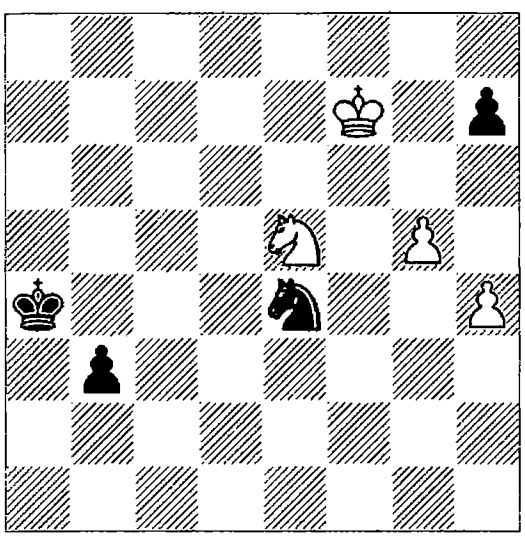
2 ♘c6?

This allows Black to execute his main idea of heading for the h4-pawn with his knight, and leads to a simple win. The critical line runs 2 ♘xg6!, and now:

1) 2...hxg6 3 h5 (there is a second draw by 3 ♔xg6 b4 4 h5 b3 5 h6 b2 6 h7 b1♕ 7 h8♕ ♘d6+, when 8 ♔g7, 8 ♔f6 and 8 ♔h5 all draw, the last two because if Black wins White's queen with a skewer, White puts his king back

on g6 and the result is stalemate) 3...gxh5 4 g6 ♘d6+ (4...♘g3 5 ♔e6! h4 6 g7 h3 7 g8♕ h2 8 ♕a8+ is another draw) 5 ♔e6 ♘e8 6 ♔f7 h4 7 ♔xe8 h3 8 g7 h2 9 g8♕ h1♕ 10 ♕a2+ ♔b4 11 ♕b2+ with a comfortable draw.

2) 2...b4!? 3 ♘e5 b3 *(D)* and now:



2a) 4 ♘d3 ♔a3 5 h5! (the move Verat overlooked, perhaps because leaving the g5-pawn *en prise* with check is counter-intuitive; instead 5 ♔g7? ♘c5 6 ♔xh7 ♘xd3 7 g6 ♘f4 8 g7 ♘h5 and 5 g6? hxg6 6 ♔xg6 ♘c5 7 h5 ♘xd3 8 h6 ♘e5+ 9 ♔g7 b2 10 h7 b1♕ 11 h8♕ ♕g6+ are both winning for Black) 5...♘xg5+ (5...♘c5 6 g6 hxg6 7 hxg6 ♘xd3 8 g7 is also drawn) 6 ♔g7 ♘e6+ 7 ♔xh7 ♘f4 8 h6 ♘xd3 9 ♔g8 b2 10 h7 b1♕ 11 h8♕ is a draw.

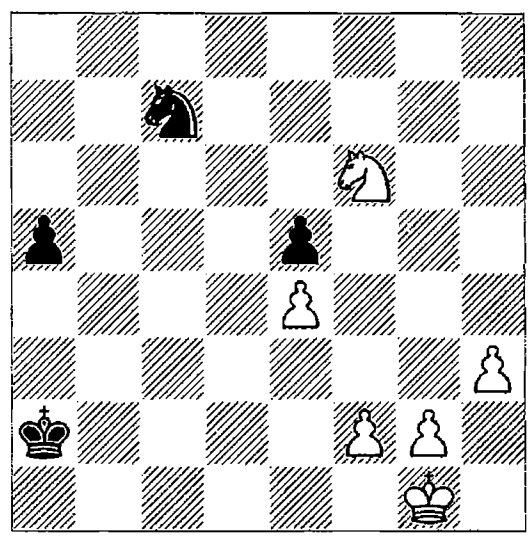
2b) 4 ♘c4 ♔b4 5 ♘b2 ♔c3 6 ♘a4+ (6 ♘d1+? loses to 6...♔c2 7 ♘e3+ ♔c1 8 ♘c4 ♘d6+) 6...♔c2 7 ♔g7 (7 g6 also draws) 7...♘c3 8 ♔xh7 (after 8 ♘xc3? ♔xc3 9 ♔xh7 b2 10 g6 b1♕ Black pins the pawn and wins) 8...♘xa4 9 g6 ♘b6 10 g7 ♘d5 11 ♔g6 ♘e7+ 12 ♔f6! (Verat only considered 12 ♔f7?, which loses to 12...♘f5) 12...♘g8+ 13 ♔f7 b2 (13...♘h6+ 14 ♔g6) 14 ♔xg8 b1♕ 15 ♔h8 ♕a1 16 h5 ♕f6 17 ♔h7 ♕f5+ 18 ♔h6! ♕f7 19 g8♕ ♕xg8 stalemate.

2...♘d6+ 3 ♔g7

Or 3 ♔f6 b4 (but not now 3...♘f5?, when 4 h5 draws) 4 ♘e5 ♔b3 5 ♘d3 ♔c3 6 ♘c5 ♔c4 7 ♘a4 b3 and Black wins as ♔g7 is always met by ...♘f5+.

3...♘f5+ 4 ♔xh7 ♘xh4 5 ♔g7 b4 6 ♘e5 b3 0-1

An outside passed pawn can also be of value to the defender, and can compensate for a considerable material disadvantage.



Loginov – Epishin
USSR 1985

This is a complex position despite White's two extra pawns, since Black's a-pawn is very dangerous. Indeed, White's main hope of winning is to give up his knight for the a-pawn, and then play with three pawns against a piece on the kingside. This is a promising idea, because Black's king will be on the a-file and so faces a long journey back to the kingside. First of all, however, White must make sure that he really can give up his knight for the a-pawn.

1 ♘d5?!

This wins but causes unnecessary complications. 1 h4? is definitely wrong since after 1...a4 2 h5 ♘e6 3 h6 ♘g5 it is time for White to force a draw by 4 f4 exf4 5 ♘d5 a3 6 ♘xf4 ♔b2 7 ♘d3+ ♔c3 8 ♘c1 ♔b2 9 ♘d3+ with a repetition of moves.

1 ♘d7! is the strongest move, since after 1...a4 2 ♘b6 a3 3 ♘c4 the a-pawn is eliminated directly, after which White wins by 3...♔b3 4 ♘xa3 ♔xa3 5 h4 ♔b4 6 h5 ♘e6 7 ♔h2! (it is more important to advance the king than to push the h-pawn; 7 h6? loses time and allows Black to draw by 7...♘g5 8 ♔h2 ♔c5 9 ♔g3 ♘f7 10 h7 ♔d6 11 ♔g4 ♔e6) 7...♔c5 8 ♔g3 ♔d6 9 ♔g4 ♔e7 10 ♔f5 ♘f4 11 h6 ♔f7 12 g3 ♘g6 13 g4, winning the e-pawn, after which Black has no chance.

1...♔b3!

Suddenly Black is able to put up more resistance. If instead 1...a4, then 2 ♘b6 wins as after 1 ♘d7!.

2 ♘b6

2 ♘xc7?? a4 3 ♘b5 ♔b4! is even winning for Black.

2...♘a8!

This forces White to reposition his knight. After 2...a4?! 3 ♘xa4 ♔xa4 4 h4 ♔b5 5 ♔h2 ♔c6 6 ♔g3 ♔d6 7 ♔g4 ♔e6 8 ♔g5 White's active king position seals Black's fate.

3 ♘d7

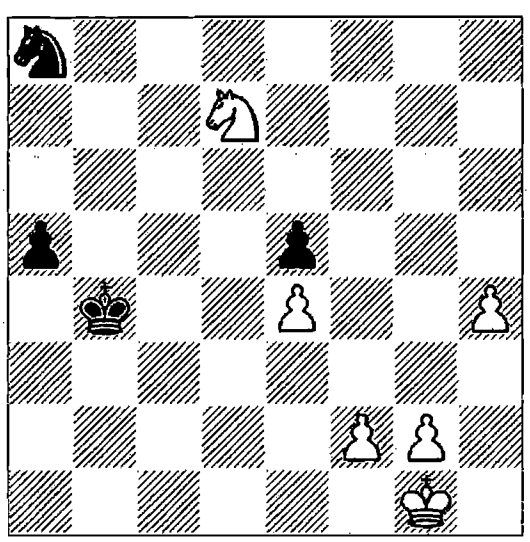
The only way to continue.

3...♔b4

Covering the c5-square, and thereby preventing the knight from sacrificing itself for the pawn. However, now that Black's knight has been forced to move to a8, pushing the h-pawn is more effective.

4 h4! *(D)*

B



4...♘c7

Once again Black finds the best defence. A race ends in White's favour: 4...a4?! 5 h5 a3 6 h6 a2 7 h7 a1♕+ 8 ♔h2 ♕e1 (Black cannot stop the h-pawn) 9 h8♕ ♕xe4 (9...♕xf2 10 ♕b8+ ♔c3 11 ♕xe5+ is winning for White) 10 ♘xe5 ♕f4+ 11 ♔h3 and Black cannot take on f2, so the two extra pawns will be decisive. Therefore Black plays to stop the h-pawn with his knight, after which the a-pawn again becomes a serious threat.

5 h5 ♘e6 6 h6 ♘g5 7 ♘b6?!

Another slip further complicating the win. The simplest line was 7 f4! exf4 8 e5 since Black's knight cannot stop both pawns: 8...a4 9 e6 a3 10 e7 a2 11 e8♕ a1♕+ 12 ♔h2 and Black has no reasonable checks, after which White's h-pawn and Black's exposed pieces prove fatal.

7 ♘xe5 also wins, but is far more involved: 7...♔c3 8 f4 ♘h7 9 g4 a4 10 g5 a3 11 g6 ♘g5 12 g7 a2 13 fxg5 a1♕+ 14 ♔h2 ♕a2+ 15 ♔g3 and the mass of advanced pawns will be decisive; for example, 15...♕e6 16 ♘g4 ♔d4 17 ♘f6 ♕e5+ 18 ♔g4 ♕e6+ 19 ♔h4 and there is no hope of perpetual check.

7...♔b5

After 7...♔c5 8 ♘a4+ ♔d6 (after 8...♔b4 9 f4 exf4 10 e5 White wins easily) 9 ♔f1 ♔e6 10 ♘c5+ ♔f6 11 ♔e2 ♔g6 12 ♔d3 ♔xh6 13 ♔c4 White heads for the a-pawn, while Black is unable to develop any counterplay on the kingside.

8 ♘d5 ♔c5

Now Black threatens to push the a-pawn, while after 9 ♘c3? ♔d4 he wins the e-pawn.

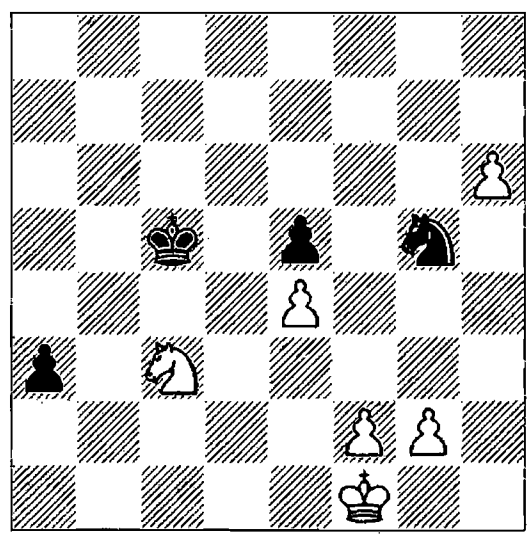
9 ♔f1!

White finds the correct continuation.

9...a4 10 ♘c3 a3 *(D)*

10...♔d4 11 ♘xa4 ♔xe4 12 ♘b6 ♔f5 13 ♘c4 e4 14 ♘d6+ ♔g6 15 ♔e2 ♔xh6 16 ♔e3 is also winning for White.

W



11 ♘a2?

White's inaccuracies are followed by a more serious mistake throwing away the win. 11 ♔e2! should still be sufficient: 11...♔c4 12 ♘a2 ♔b3 13 ♔d3 ♔xa2 14 ♔c2 ♔a1 15 f4 a2 (15...exf4 16 e5 a2 17 ♔c1! also wins for White) 16 fxe5 ♘e6 17 h7 ♘d4+ 18 ♔d3 ♔b2 19 h8♕ a1♕ 20

♔xd4 ♕a7+ 21 ♔d3 and the checks will run out in the end.

11...♔d6

This is sufficient to draw, but an even simpler line is 11...♔d4! 12 f3 ♔e3 13 ♔e1 ♔f4 14 ♔f2 (14 ♔d2 ♔g3 also draws easily) 14...♘h7 followed by ...♔g5 rounding up the h-pawn.

12 ♔e2 ♔e6 13 ♔d3 ♔f6 14 ♘c3

Or 14 ♘c1 ♔g6 15 f3 ♘e6 16 ♔c3 ♘f4 and again Black secures counterplay.

14...♔g6!

This is the most accurate, maintaining the pressure against e4 for the moment.

15 ♔c2

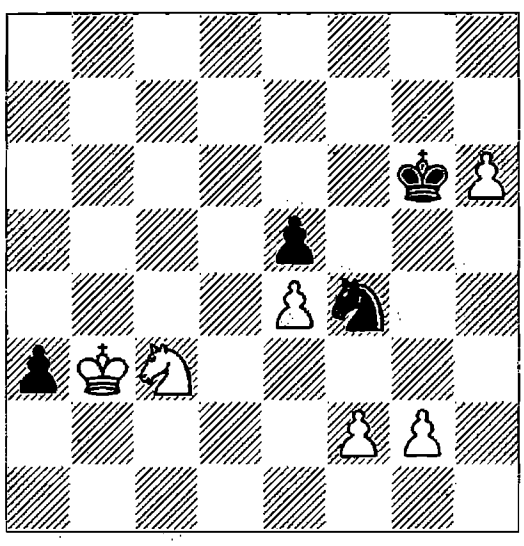
15 ♔c4?! ♘xe4 is an immediate draw.

15...♘e6

15...♔xh6 16 ♔b3 ♘e6 also draws.

16 ♔b3 ♘f4 *(D)*

W



Black is in time to attack the pawns with his knight.

17 g3 ♘d3 18 f3

18 ♘d1 ♘c5+ 19 ♔xa3 ♘xe4 20 ♔b4 ♔xh6 21 ♔c4 ♔g5 22 ♔d3 ♘xg3 is also an easy draw.

18...♘e1 19 ♔xa3

19 f4 exf4 20 gxf4 ♘d3 21 f5+ ♔xh6 22 ♔xa3 ♔g5 23 ♔b3 ♘c5+ followed by ...♘xe4 eliminates White's last pawns.

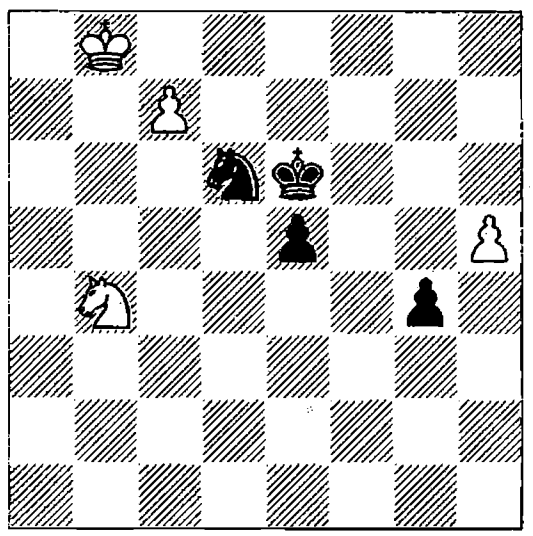
19...♘xf3 20 ♔b4 ♔xh6

Black's difficulties are over.

21 ♔c5 ♔g5 22 ♔d6 ♔g4 23 ♘e2 ♔h3 24 ♔e6 ♘d4+ 25 ♔xe5 ½-½

Where one side has two passed pawns, a lot depends on the distance between the pawns. If they are relatively close together, it may be possible for the knight to restrain both, but if they are far apart this is out of the question.

W



Ubilava – Mukhin
USSR 1974

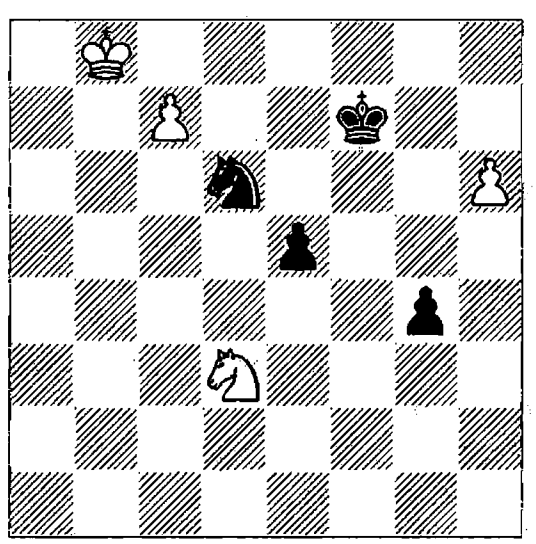
This position is winning for White. Both sides have two passed pawns, but White's are both further advanced and further apart.

1 h6 ♔f7

After 1...g3 2 h7 g2 3 h8♕ g1♕ White has the first check and this proves decisive: 4 ♕h6+ ♔d7 5 ♕h3+ ♔e7 6 ♘d5+ ♔f8 7 ♕h6+ picks up the knight and wins.

2 ♘d3 *(D)*

B



Now Black must surrender one of his pawns.

2...g3

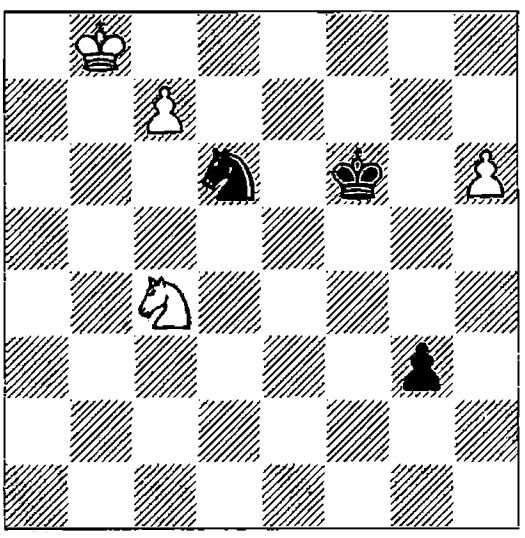
The only chance, as after 2...e4 3 ♘e5+ ♔f6 4 ♘xg4+ ♔g6 5 ♘e5+ ♔xh6 6 ♘c4 White promotes the c-pawn.

3 ♘xe5+ ♔f6

Or 3...♔g8 4 ♘c4! ♘c8 (4...g2 5 ♘xd6 transposes) 5 ♘e3 ♘d6 6 ♘f5 (now White is also attacking the g3-pawn, so Black can't play his knight to c8) 6...g2 7 ♘xd6 g1♕ 8 c8♕+ ♔h7 9 ♘f5 and White wins, because Black's queen checks are all met by an interposition with check.

4 ♘c4! *(D)*

B



4...♘c8?

The best defence is 4...g2! 5 ♘xd6 (forced, because 5 h7? ♔g7 is only a draw) 5...g1♕ 6 c8♕, but White still wins after 6...♕b6+ 7 ♘b7 ♔g6 8 ♕h8! (the only move to win, as 8 ♕h3? ♔h7 costs White the h-pawn) 8...♕f6 9 ♕xf6+ ♔xf6 10 ♘d6 ♔g6 11 ♘f5 and White saves the pawn.

5 ♘e3 ♘d6 6 h7 ♔g7 7 ♘f5+ 1-0

White wins after 7...♔xh7 8 ♘xg3 followed by ♘e4.

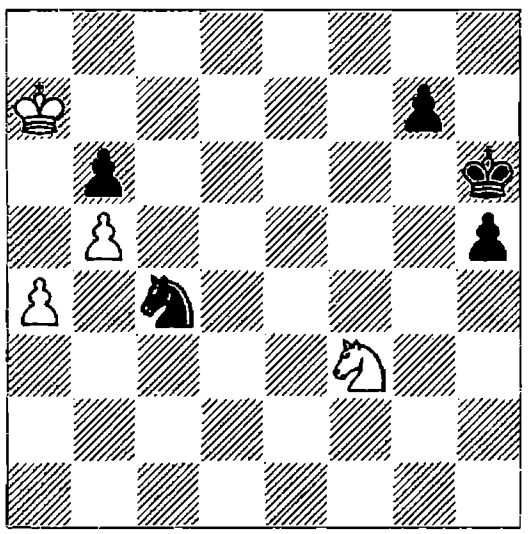
Summary:

- Outside passed pawns are very effective in knight endings, and a passed rook's pawn especially so.
- If the outside passed pawn is supported by the attacker's king, the best chance for the defender is often to give up the knight for the pawn and try to draw by eliminating all the pawns on the opposite wing.
- An outside passed pawn is also useful in defence, and can offer hope of saving the game even in the face of a considerable material disadvantage.

3.9 Sacrificing a Knight

We now move on to discuss some common tactical ideas in knight and pawn endings. One idea which occurs rather often is that of sacrificing the knight. The simplest case arises when a knight offer ensures the promotion of a pawn.

W



Szabo – Groszpeter
Hungary 1984

One's first reaction on seeing this position is that White is in trouble. He is a pawn down and, although he can create a passed pawn on the queenside, if Black can give up his knight for the passed pawn then the kingside pawns will prove decisive. Unexpectedly, however, White has a tactical stroke that not only saves the game but even wins it.

1 ♘d2!! ♘xd2

The alternative 1...♘b2 is also interesting since after 2 a5 bxa5 3 b6 ♘d3 4 b7 ♘e5 White wins by 5 ♔b8! (the same idea appears again below); the threat is 6 ♔c7, and White promotes his pawn after 5...♘d7+ 6 ♔c8 ♘b6+ 7 ♔d8 or 5...♘c6+ 6 ♔c7 ♘b4 7 ♔b6 ♘d5+ 8 ♔b5 ♘c7+ 9 ♔xa5.

After other knight moves, White simply plays ♔xb6 and promotes his a-pawn, while his own knight can hold up Black's h-pawn.

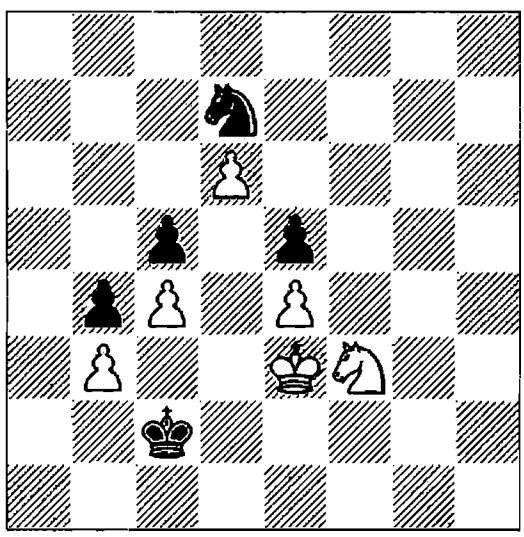
2 a5! 1-0

It is surprising that there is no way Black can prevent White from making a queen; for example, 2...bxa5 (or 2...♘c4 3 a6 ♘d6 4 ♔xb6 h4 5 ♔c5! h3 6 a7 ♘b7+ 7 ♔b4 h2 8 a8♕ h1♕ 9

♕h8+ and White wins the black queen) 3 b6 ♘c4 4 b7 ♘e5 and now White wins with the paradoxical move 5 ♔b8!!, blocking his own pawn. The threat is 6 ♔c7 and White promotes after 5...♘d7+ 6 ♔c8! ♘b6+ 7 ♔d8 or 5...♘c6+ 6 ♔c7 ♘b4 7 ♔b6 ♘d5+ 8 ♔b5 ♘c7+ 9 ♔xa5.

Sometimes the knight sacrifice doesn't lead to immediate promotion, but serves to create some dangerous passed pawns which prove at least a match for the enemy knight.

W



Perunović – Abramović
Serbian Ch, Pančevo 2006

White is a pawn up with an advanced passed pawn, but Black's king has penetrated amongst White's pawns. White could now play 1 ♘d2 with a draw, but he decides to sacrifice his knight. This is a good practical decision since, although it should not be sufficient to win, Black has to solve several problems to reach the draw.

1 ♘xe5!? ♘xe5 2 ♔f4 ♘f7!

2...♘d3+? 3 ♔f5 ♔xb3 4 d7 ♔c2 5 d8♕ b3 is an interesting defence since although Black's pawn is only on the sixth rank, his knight is very well placed to shield the king from queen checks. White can win, but accurate play is required: 6 ♕d6 b2 7 ♕h2+ ♔c3 8 ♕g1 ♘c1 (8...♔c2 9 e5 wins for White) 9 ♕g7+ (now that the black knight has been dragged further away, White restrains the b-pawn from another direction) 9...♔c2 10 ♕b7 ♘b3 (10...b1♕ 11 ♕xb1+ ♔xb1 12 e5 and White wins) 11 e5 b1♕ 12 ♕e4+ ♔c1 13 ♕xb1+ ♔xb1 14 e6 and White wins the king and pawn ending after Black gives up his knight for the pawn.

3 e5 ♔xb3 4 d7

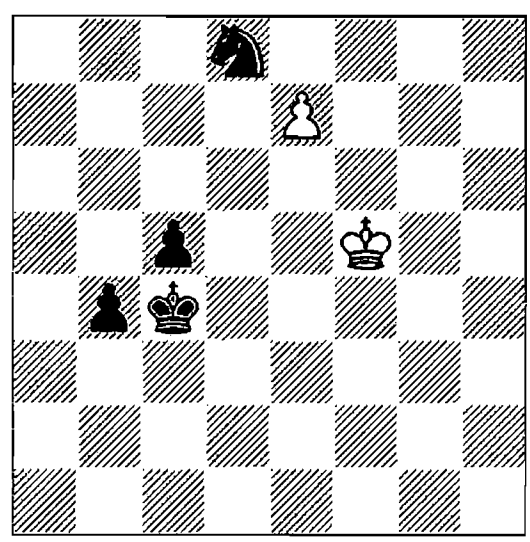
Now e6 is a threat, hence Black's reply is forced.

4...♘d8 5 ♔f5 ♔xc4 6 e6 ♘c6!

Again the right move. After 6...b3? 7 e7 b2 8 exd8♕ b1♕+ White can win, even though his queen is temporarily offside: 9 ♔e6 (the king is heading for c8) 9...♕e4+ 10 ♔d6 ♕f4+ 11 ♔c6 ♕f3+ 12 ♔c7 ♕g3+ 13 ♔c8 ♕h3 14 ♕g8+ ♔c3 15 ♔c7 ♕h2+ 16 ♔c6 ♕h6+ 17 ♔b5 and the checks run out.

7 d8♕ ♘xd8 8 e7 *(D)*

B



8...♘b7?

The wrong square for the knight. 8...♘f7! would have drawn: 9 ♔e6 ♘g5+ 10 ♔d6 ♘e4+! (by means of this series of checks, Black can bring his knight into contact with his remaining forces with gain of time) 11 ♔e5 ♘d2 12 e8♕ b3 and White cannot make progress just with checks, but if he stops checking Black can simply push his pawn.

9 ♔e5 b3 10 e8♕

Black's knight is separated from the other pieces and White can win it with little loss of time.

10...b2

10...♘a5 11 ♕a4+ ♔d3 12 ♕xa5 b2 13 ♕a3+ ♔c2 14 ♕xc5+ and White wins.

11 ♕f7+ ♔c3 12 ♕xb7 c4

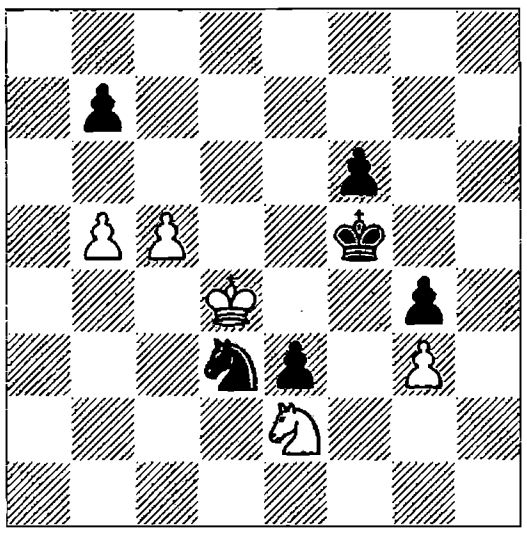
White also wins after 12...♔c2 13 ♕e4+ ♔c1 14 ♕c4+ ♔d2 15 ♕b3 ♔c1 16 ♕c3+ ♔b1 17 ♔e4.

13 ♕e4 ♔b3 14 ♔d4 c3 15 ♕d3 1-0

After 15...♔a2 16 ♕c2 ♔a1 17 ♕a4+ ♔b1 18 ♔xc3 it is mate next move.

A knight sacrifice can also be used for defensive purposes. In the next position Black gives up his knight to secure counterplay and reduce the number of enemy pawns.

B



Kaidanov – Bosboom
Groningen 1990

Black is a pawn up, but his knight and pawn are both under attack so his material advantage is purely temporary. Indeed, it is White who stands clearly better thanks to his queenside pawn-majority, which can create a passed pawn at any moment. In such situations, it is often hard to decide whether to defend passively or try something dramatic to change the course of events. In this game Black correctly decided on the latter course.

1...♘xc5!

Not 1...♘b4?, which loses to 2 ♔c4 ♘c2 3 c6 bxc6 4 b6. Passive defence by 1...♘e5 is an option, but after 2 ♔xe3 ♔e6 3 ♘f4+ ♔d7 4 ♔d4 ♘f3+ 5 ♔d5 Black's position is very awkward; White's pieces occupy active positions and it is likely that Black will lose a pawn within a few moves.

2 ♔xc5 ♔e4

The knight sacrifice has benefited Black in two ways: firstly, he has saved his passed e-pawn and now has two pawns for the piece, while secondly his king has been freed and can now actively support the e-pawn. Nevertheless, a piece is a large sacrifice and Black must continue accurately if he is to save the game.

3 ♔c4

The king must return to d3 because 3 ♔b6? ♔f3 4 ♘c3?! ♔xg3 5 ♔xb7 ♔f3 6 b6 g3 7 ♔c6 g2 8 b7 g1♕ 9 b8♕ is certainly not better for White.

3...♔f3 4 ♔d3 b6

This isn't the only drawing move, but it makes sense to prevent White from advancing his b-pawn further, as it would then be one step closer to promotion in the event of the knight taking Black's b-pawn.

5 ♘c3

White's only winning chance is to put Black in zugzwang, and the first step is to force Black to advance his pawn to f5 so that he doesn't have any reserve pawn tempi.

5...f5

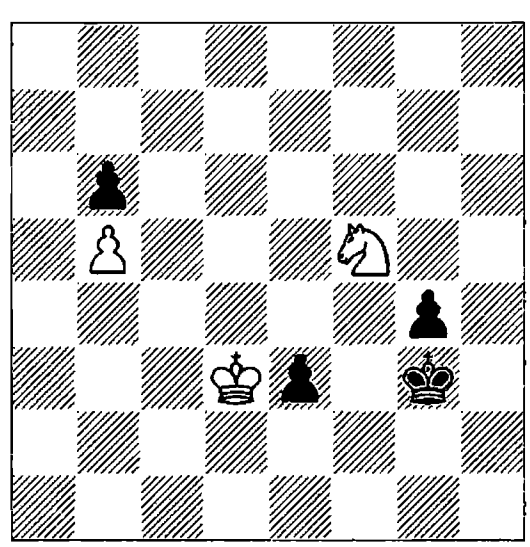
White wins after 5...♔f2? 6 ♘e4+ ♔f3 7 ♘xf6 e2 8 ♔d2 ♔f2 9 ♘xg4+ ♔f3 10 ♘e3 ♔f2 11 ♘g2 ♔f3 12 g4, so this move is forced.

6 ♘e2 ♔f2 7 ♘d4

This is the position White was aiming for, since Black is now forced to take on g3.

7...♔xg3 8 ♘xf5+ *(D)*

B



8...♔f2?

Having conducted the defence so accurately up to here, Bosboom now makes a fatal mistake. As pointed out by Khalifman, he should have run with his king towards White's b-pawn: 8...♔f4! 9 ♘xe3 (9 ♘d4 g3 10 ♘e2+ ♔e5! is also a draw) 9...♔e5! 10 ♔c4 g3 11 ♘g2 ♔e4 12 ♘h4 ♔e5 and White cannot make progress.

9 ♘xe3 g3

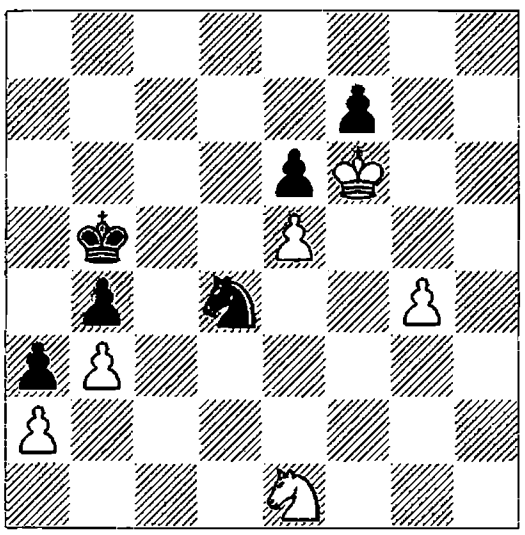
9...♔f3 10 ♘xg4 ♔xg4 11 ♔e4 and White wins.

10 ♔e4 ♔e2 11 ♘d5 1-0

White wins easily after 11...♔f2 12 ♘f4 ♔g1 13 ♘e2+ and 14 ♘xg3.

In the following example, Black's only hope of saving the game lies with a knight sacrifice. White should have foreseen this possibility and taken steps to nullify it.

B



Hecht – Pomar
Olot 1971

Black is clearly in difficulties since his f7-pawn is about to fall, after which White will have a passed g-pawn. Black's only chance is to make use of his advanced queenside pawns to engineer some sort of breakthrough there, but the sacrifice on b3 doesn't work right away because the a-pawn is easily stopped by ♘c2.

1...♔c5!?

The best try; Black prepares ...♘xb3 followed by the march of the king to b2 to support the a-pawn. According to Marić in *Informator 11* this is sufficient to ensure a draw, but White can win.

2 ♔xf7?

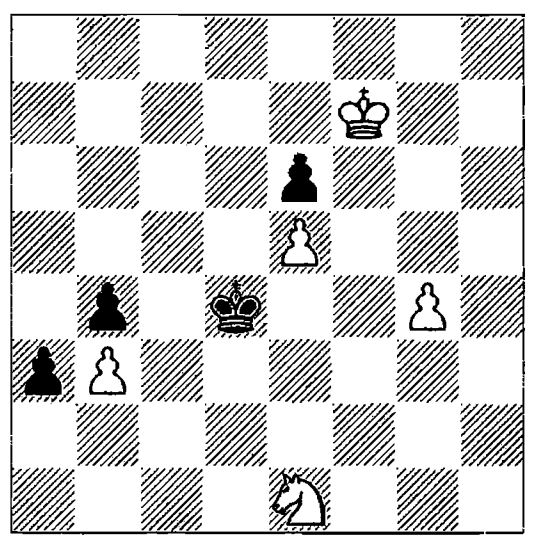
This automatic capture throws away the win. White should have taken steps to counter Black's defensive plan by 2 ♘d3+ (this is the correct moment to check on d3, because now Black's king cannot move to c4) 2...♔b5 3 ♔xf7! (3 ♘c1?! ♘f3 4 g5 ♔c5 5 ♘d3+ ♔d4 6 ♘xb4 ♔c3 7 ♘c6 ♔b2 8 b4 ♔xa2 9 b5 ♔b3 10 b6 a2 11 b7 a1♕ 12 b8♕+ is also promising for White, although possibly not a win) 3...♘xb3 4 g5 ♘d4 (4...♘d2 5 ♘c1 and White wins) 5 ♘c1! (5 ♘xb4? ♔xb4 6 g6 ♔c3 7 ♔f6 ♘f5 8 ♔xe6 ♘h6 9 ♔d7 ♔b2 10 e6 ♔xa2 11 e7 ♘g8 is only a draw) 5...♔c4 6 g6 ♔d5 (6...♔c3 7 ♔f6! also wins for White) 7 ♔f6 ♘f5 8 ♘d3 b3 (8...♔c4 9 ♘xb4 ♔xb4 10 ♔xe6 and here White wins because Black's king is one square further away from the a-pawn) 9 axb3 ♔d4 10 ♘c1 ♔c3 11 ♔xe6 ♘h6 12 ♔d7 ♔b2 13 e6 ♔xc1 14 e7 a2 15 e8♕ a1♕ 16 ♕e1+ ♔b2 17 ♕xa1+ ♔xa1 18 b4 and the b-pawn cannot be stopped.

2...♘xb3! 3 axb3

3 ♘d3+ ♔c4 4 ♘xb4 ♔xb4 5 g5 is also only a draw after 5...♘d4! (5...♘c1? loses to 6 g6 ♘xa2 7 g7 ♘c1 8 g8♕ a2 9 ♕a8 ♔b3 10 ♔xe6 ♔b2 11 ♔d6 as the e-pawn is too strong) 6 ♔f6 ♔c3 7 g6 ♘f5 transposing into the analysis of 5 ♘xb4? in the previous note.

3...♔d4! *(D)*

W



The king moves in before it is sealed out by ♘c2.

4 g5 ♔c3 5 g6 a2 6 g7 a1♕ 7 g8♕ ♕xe1 8 ♕c8+ ♔xb3 9 ♕xe6+

The two pawns are equally far advanced so it is no surprise that this position is a draw.

9...♔b2 10 ♕f6 b3 11 e6+ ♔c2 12 ♕f5+ ♔c1!

The only move, as Black must not allow White to exchange queens and then promote with check, nor must he block the b-pawn.

13 e7 b2 14 ♕c5+ ♔d1 15 ♕d4+ ♔c2 16 ♕c4+ ♔d1! 17 ♕d3+ ♔c1 ½-½

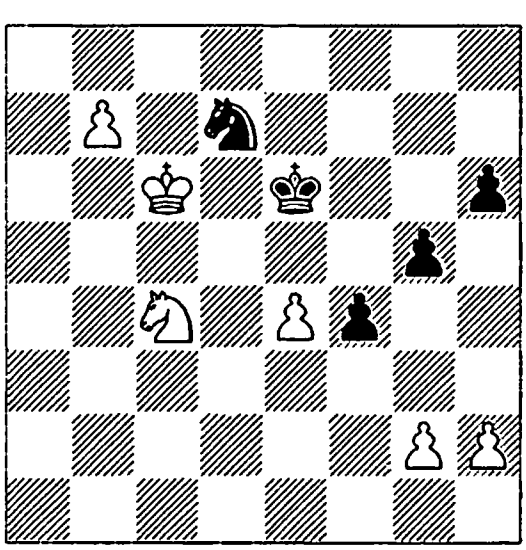
Summary:

- Knight sacrifices occur relatively often in knight endings. In the simplest case, offering the knight ensures the promotion of a passed pawn.
- Even if there is no immediate promotion, giving up the knight can create passed pawns that are more than a match for the enemy knight.
- The defender can also make use of a knight sacrifice, to create counterplay with passed pawns and to eliminate some of the attacker's pawns.

3.10 Common Error: Promoting Too Soon

If the attacker has an advanced passed pawn, the outcome is usually that he wins his opponent's knight for the pawn, but this is not inevitable. Sometimes it is possible to drive the enemy knight away from the pawn and thus gain a queen rather than a knight. A common error is to 'cash in' a passed pawn too quickly, missing an opportunity to extract more from the pawn.

W



Vainerman – Timoshchenko
Norilsk 1987

This position is dead lost for Black since not only is he a pawn down, but White also has a monster passed pawn on b7. Nevertheless, Black miraculously escaped with a draw. As so often happens, the win wasn't thrown away by a single move, but by a succession of errors. The first step off the correct path makes the win harder rather than throwing it away completely, but when unexpected problems suddenly appear, it's easy for further errors to creep in.

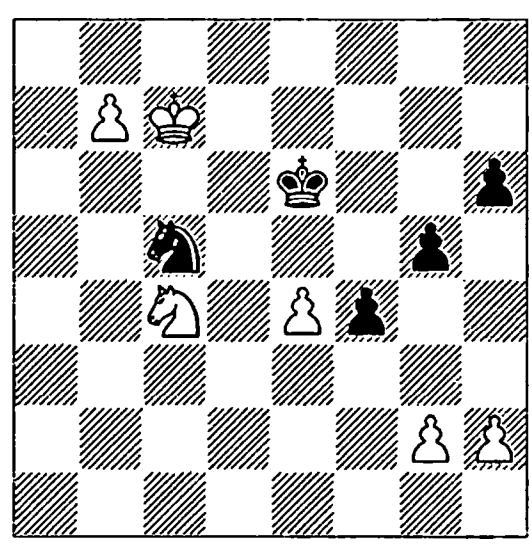
1 ♔c7?

It's not necessary for White to allow Black to give up his knight for the b-pawn. The simplest win is 1 ♘b2! h5 (1...g4 2 ♘d3 is even worse as now the f4-pawn is hanging) 2 ♘d3 (threatening 3 ♘c5+) 2...♘b8+ (2...♔e7 3 ♘c5 ♘b8+ 4 ♔c7 is also a win for White) 3 ♔c7 ♘d7 4 ♔d8 ♘b8 5 ♔c8 ♘d7 6 ♘e5! and the b-pawn promotes.

1...♘c5! *(D)*

Although this does not save the game, it is by far the best chance. After 1...g4 2 ♘e5! ♘c5 3 ♘xg4 or 1...h5 2 ♔c8 g4 3 ♘e5 ♘b6+ 4 ♔c7 Black loses at once.

W



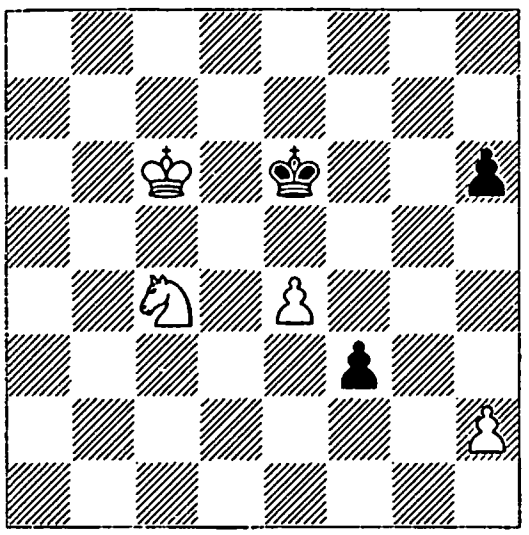
2 b8♕?!

A further slip which again increases White's difficulties. By continuing 2 ♔c8 ♘xb7 (after 2...♘a6 3 ♘b2 g4 4 ♘d3 f3 5 gxf3 gxf3 6 ♘c5+ White wins more easily) 3 ♔xb7 g4 4 ♔c6 White would have ended up with the same position as in the game, but with his king on c6 instead of c7, thus gaining a clear tempo.

2...♘a6+ 3 ♔c8 ♘xb8 4 ♔xb8 g4 5 ♔c7 f3 6 gxf3 gxf3 7 ♔c6 *(D)*

According to the notes by Khuzman and Vainerman in *Informator 44*, this move throws away the win, but it is perfectly adequate if followed up correctly. Their suggestion 7 ♔d8 is also good, and wins after 7...f2 8 ♘d2 ♔e5 (or 8...h5 9 h4 ♔e5 10 ♔e7 ♔f4 11 ♔f6 ♔e3 12 ♘f1+ ♔xe4 13 ♔g5 and White wins) 9 ♔e7

♔d4 10 ♔f6 ♔e3 11 ♘f1+ ♔e2 (11...♔xe4 12 ♔g6 ♔f4 13 h4 is a simple win) 12 ♘g3+ ♔f3 13 e5 ♔g2 14 ♔g6 ♔xh2 15 ♘f1+ ♔g2 16 ♘d2 and the e-pawn decides.



7...f2 8 ♘d2 ♔e5 9 ♔c5 h5

The only chance, as 9...♔f4 loses to 10 ♔d4 followed by e5.

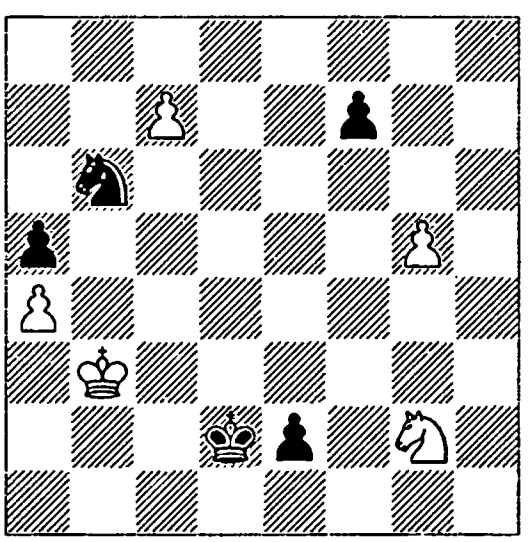
10 ♔c4

Threatening ♔d3.

10...f1♕+ 11 ♘xf1 ♔xe4

We have reached the diagram at the start of Section 3.3 (page 144), and readers should refer there for the conclusion to the game and details of the win White overlooked.

In the following position, Black had the right idea but failed to follow it through to its logical conclusion.



Dudkin – Gofman
USSR 1989

Immediate promotion is wrong since if Black continues 1...e1♕? 2 ♘xe1 ♔xe1 then White draws by 3 ♔c3, and now:

1) 3...♘xa4+ 4 ♔c4 ♘b6+ 5 ♔b5 ♘c8 6 ♔xa5 ♔e2 7 ♔b5! (White heads for the f-pawn; 7 ♔a6? ♔f3 8 ♔b7 ♘e7 wins for Black) 7...♔e3 8 ♔c6 ♔f4 9 ♔d7 ♘a7 10 ♔e7 and White is just in time.

2) 3...♘d5+ 4 ♔c4 ♘xc7 5 ♔c5 ♔e2 (the alternative 5...♘e6+ 6 ♔b6 ♘xg5 7 ♔xa5 ♘e4 8 ♔b6 ♘d2 9 ♔c5 is also drawn) 6 ♔b6 ♘d5+ 7 ♔xa5 ♘c3 (7...♔e3 8 ♔b5 ♘c3+ 9 ♔c6 ♘xa4 10 ♔d6 ♔f4 11 ♔e7 is again just in time) 8 ♔b6! ♘xa4+ 9 ♔c6 ♘c3 10 ♔d6 ♘e4+ 11 ♔e7 ♘xg5 12 ♔f6 and White saves the day.

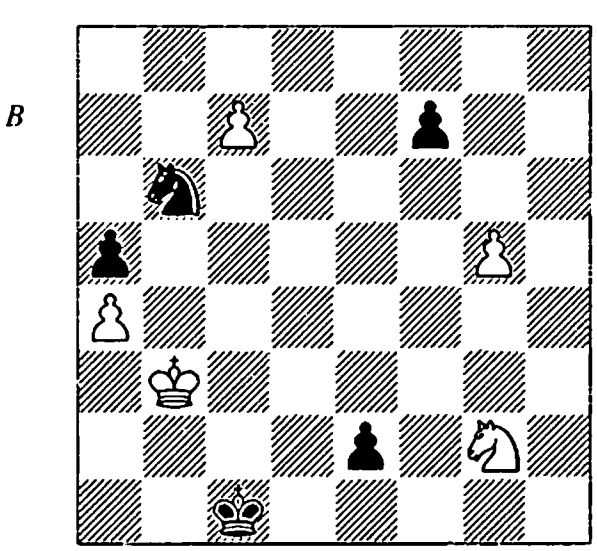
Thus immediate promotion doesn't work, but what other options does Black have? In such situations, it's often useful to ask if the situation would be improved were the other player to move. Here, if White were to play, his only move would be ♘h4; then, while it is perhaps not immediately obvious how Black wins, at least he has the opportunity to try something new. Thus the first task is to lose a tempo, and see if any possibilities open up.

1...♔d1! 2 ♘e3+

Forced, because 2 ♔a3 e1♕ 3 ♘xe1 ♔xe1 4 ♔b3 ♔d2 is hopeless for White and he has no other moves.

2...♔c1! 3 ♘g2 *(D)*

Or 3 ♘c2 ♔d2 4 ♘d4 ♔e3! 5 ♘c2+ (5 ♘xe2 ♔xe2 6 ♔c3 ♔e3 and Black wins) 5...♔f2, transposing into the note to Black's 4th move.



3...♔d2

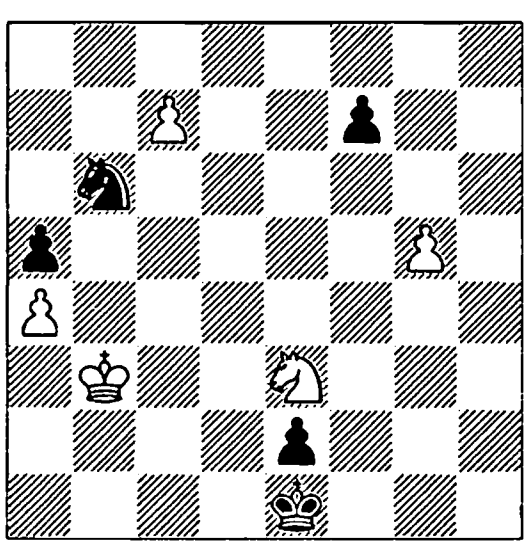
The triangulation is complete and White is now forced to play ♘h4.

4 ♘h4 ♔c1?!

Black is not sure how to proceed and wastes time. He could have won by transferring his king to the other side of the pawn: 4...♔e1! 5 ♘g2+ (after 5 ♘f3+ ♔d1 White is in a fatal zugzwang) 5...♔f1 6 ♘e3+ ♔g1! (again Black must triangulate with his king to ensure that White is to move in the critical position) 7 ♘c2 ♔f2 (this is the position Black has been aiming for; it's zugzwang, just like the position with Black's king on d2 and White's knight on g2, but this time there is no escape for White because the corresponding move ♘b4 is not available) 8 ♔b2 (Black also wins after 8 ♔c3 ♘d5+ 9 ♔c4 ♘xc7 10 ♔c5 ♘a6+ followed by ...♘b4) 8...♘xa4+ 9 ♔c1 ♘b6 10 ♔d2 a4 11 ♘e1 a3 12 ♘d3+ ♔f1 13 ♔c2 e1♕ 14 ♘xe1 ♔xe1 15 ♔b3 ♔d2 16 ♔xa3 ♔e3 and Black wins.

5 ♘g2 ♔d1 6 ♘e3+ ♔e1? *(D)*

Now the win is gone for good. Black could still have entered the winning line by 6...♔c1, repeating the position at move 2.



7 ♘d5!

White seizes his chance to force Black's knight into a more passive position.

7...♘c8 8 ♘f4 ♘b6

There is nothing better, since 8...♔d2 9 ♘xe2 ♔xe2 now leads to a draw after 10 ♔c4 ♔e3 11 ♔b5 ♔d4 (11...♔f4 12 ♔xa5 ♔xg5 13 ♔a6 f5 14 ♔b7 is also drawn) 12 ♔c6! (12 ♔xa5? ♔c5 13 ♔a6 ♔c6 wins for Black) 12...♔e5 13 ♔d7 ♘a7 14 ♔e7 ♔f5 15 ♔xf7 ♔xg5 16 ♔e6 ♔f4 17 ♔d6 ♔e4 18 ♔c5 and Black cannot save the a-pawn.

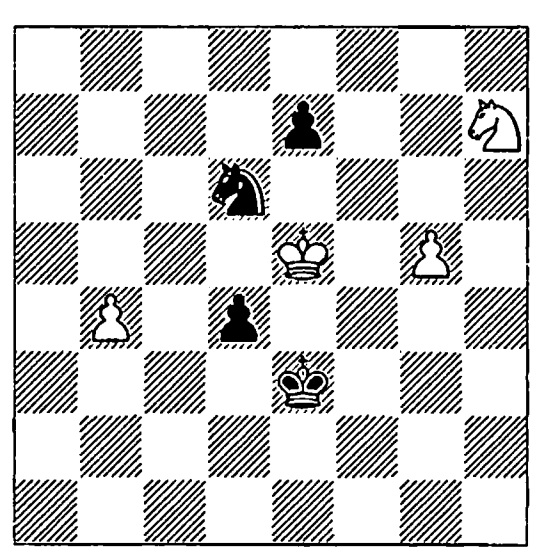
9 ♘d5 ½-½

Summary:

- An advanced passed pawn will often win the enemy knight, but instead of cashing in the pawn right away, it is often possible to extract more from it.
- One possibility is to chase away the enemy knight and thus gain a whole queen; another is to use the pawn to gain time and improve one's position before eventually promoting.

3.11 Mate, Stalemate and Breakthrough

Tactical ideas occur in all types of ending, and knight endings are no exception. We have already seen a couple of examples of these themes in Section 3.5.2 (page 160), which dealt with positions in which only one side has a knight. This time we look at positions where both sides have a knight. The first example features a spectacular mid-board mate.



Istrate – Peptan
Timisoara 1995

This position contains some tricky tactics. Both sides have passed pawns on the fifth rank and White moves first, but that does not mean that White has any advantage, since his passed pawn can be held up by ...♘f7+ and ...♘h6, while it isn't easy for White's offside knight to

hold up Black's passed pawn. This is the main factor giving Black winning chances, although with correct defence the position should be a draw.

1 g6

Speed is essential if White is to save the game.

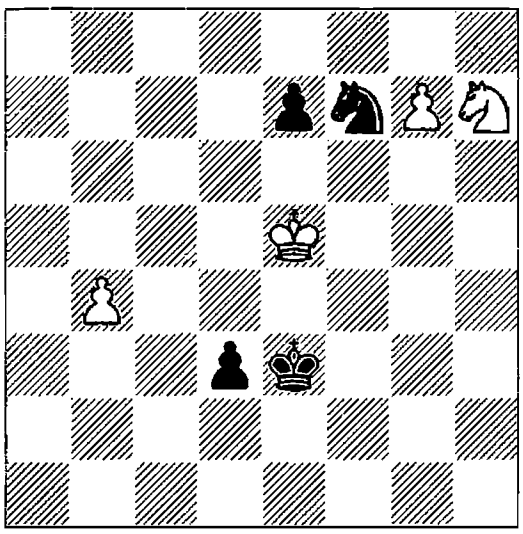
1...d3

It's quite wrong for Black to defend passively by 1...♘e8? since then White can stop Black's pawn with his knight, after which the b-pawn becomes a major factor: 2 ♘g5 ♘f6 3 g7 d3 4 ♘e4 ♘g4+ (4...d2 5 ♘xd2 ♔xd2 6 b5 also wins for White) 5 ♔e6 ♘h6 6 ♔d5 e6+ 7 ♔e5 ♘g4+ 8 ♔xe6 ♘h6 9 ♔e5 ♘g4+ 10 ♔d5 ♘f6+ 11 ♔e6 ♘g8 12 ♔e5 and White wins.

2 g7 ♘f7+ *(D)*

The only winning chance, as 2...d2 is just a draw.

W



3 ♔f5

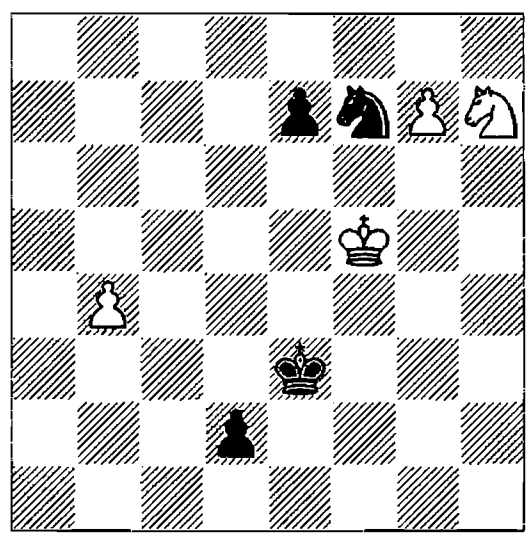
Forced as the king must be ready to dislodge the knight from h6 without delay.

3...d2

The other winning attempt was 3...♘h6+!?, but this also leads to a draw if White defends correctly: 4 ♔g6 ♘g8 5 ♔f7 d2 (the only way to play for a win) 6 ♔xg8 d1♕ 7 ♔h8! (7 ♔f7? ♕h5+ 8 ♔f8 ♕xh7 9 g8♕ ♕xg8+ 10 ♔xg8 ♔d4 and 7 ♔f8? ♕d8+ 8 ♔f7 ♕d5+ 9 ♔f8 ♕f5+ 10 ♔g8 ♔f4 11 ♔h8 ♕e5 12 b5 ♔f5 13 ♘f8 ♔g5 are both winning for Black) 7...♕a1 8 b5! (it is essential to start pushing this pawn straight away in order to draw Black's queen away from the pin on the g-pawn; not 8 ♘g5? ♔f4 9 ♔h7 ♕h1+ 10 ♔g6 ♕c6+ 11 ♔h7 ♕c2+ 12 ♔h8 ♕b2! 13 ♔h7 ♕h2+ 14 ♔g6 ♕c2+ 15 ♔h6 ♕c4 and Black wins) 8...♔f4 9 b6 ♔f5 10 ♘f8! (preventing the black king's approach; 10 b7? ♔g6 11 ♘f8+ ♔f7 mates) 10...♔g5 11 b7 ♔h6 12 ♘e6 and White draws.

We now return to 3...d2 *(D)*:

W



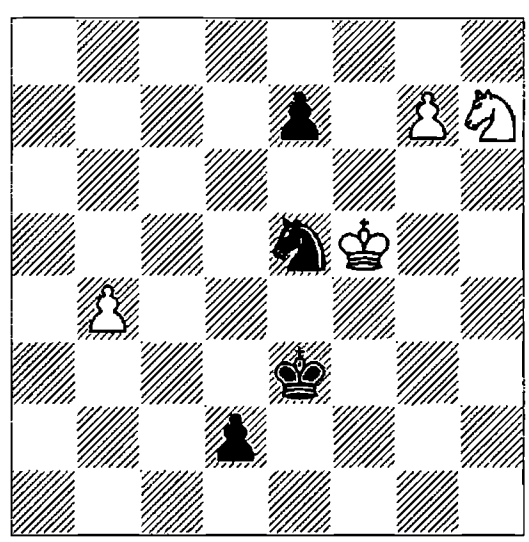
4 ♔g6 ♘e5+

4...d1♕ 5 g8♕ is just a draw.

5 ♔f5? *(D)*

White makes a fatal error, attacking Black's knight but failing to take into account an unusual mating possibility. He could have drawn by 5 ♔h6! (the only move) 5...d1♕ 6 g8♕ ♕h1+ 7 ♔g7 ♕g2+ and now both 8 ♔h8 and 8 ♔f8 are safe for White.

B



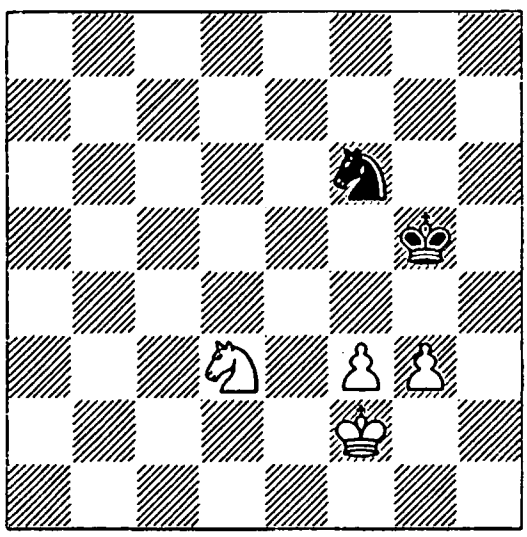
5...d1♕ 6 g8♕ ♕c2+! 0-1

A shock for White; Black is prepared to sacrifice her knight to achieve a mid-board mate

after 7 ♔xe5 (7 ♔g5 ♕g2+ and 7 ♔e6 ♕a2+ cost White his queen) 7...♕e4#.

The following position is, of course, a simple technical win, but it is interesting to see how even one of the world's leading players can throw away half a point through overlooking a tactical resource that does not fit into one of the usual patterns.

W



Grishchuk – J. Polgar
Biel 2007

1 f4+ ♔g4 2 ♘e5+?!

The position is still a win after this move, but why allow Black's king to occupy an active position? 2 ♔g2 first, followed by a knight check, would have driven Black back and won easily.

2...♔h3

Thanks to White's previous move, there is now only one way to win. Admittedly this involves a move which is fairly obvious, but in the game White overlooked a cunning defence and let Black off the hook.

3 ♔f3?

After this it's a draw. 3 f5! is correct, when 3...♘e4+ 4 ♔f3 ♘xg3 5 f6 lets the pawn run through, so Black cannot prevent ♔f3 with a straightforward win.

3...♘g4!

A nasty stalemate trick. Remarkably, this position is reciprocal zugzwang; Black has no threat, but White has no waiting move.

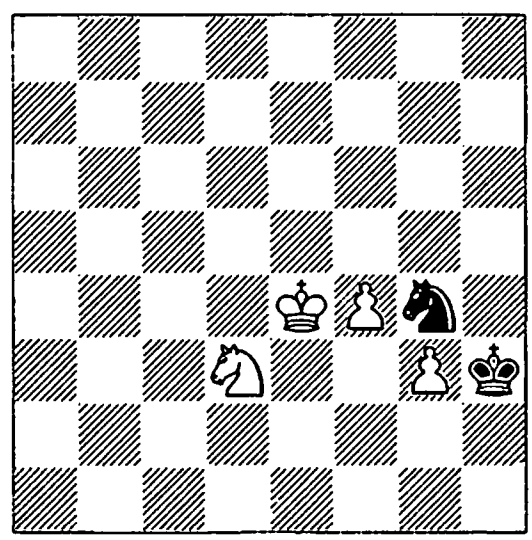
4 ♘d3

4 ♔e4 ♘f2+ and 4 ♔e2 ♔xg3 are clear draws, while 4 ♘g6 ♘h2+ 5 ♔e4 ♘f1! (but not 5...♔xg3? 6 ♘e5 and White wins) causes Black less trouble than in the game.

4...♘h2+ 5 ♔e4 ♘g4! *(D)*

The only move to draw, since 5...♔xg3 6 ♘e5! ♘f1 7 f5 and 5...♘f1 6 ♘f2+ ♔xg3 7 f5 are winning for White.

W



6 ♘e5 ♘f6+ 7 ♔f3

7 ♔f5 is met by 7...♔xg3.

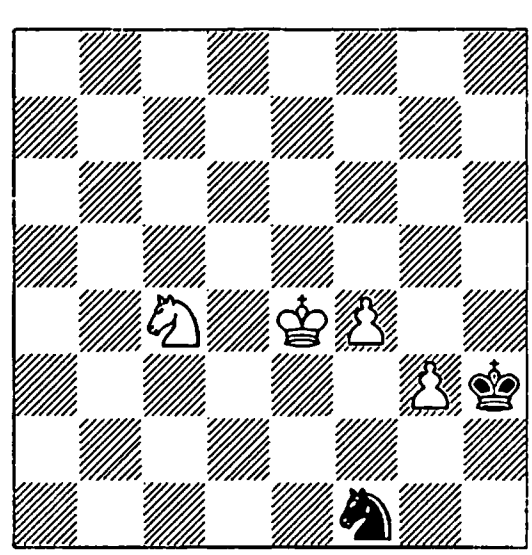
7...♘g4

Back to square one, so White tries a different tack.

8 ♘c4 ♘h2+ 9 ♔e4 ♘f1! *(D)*

Now this is the correct choice, since 9...♘g4? loses to 10 ♘e3.

W



10 ♘e3 ♘xg3+ 11 ♔e5 ♔h2

11...♘h5 12 f5 ♔h4 is also a draw.

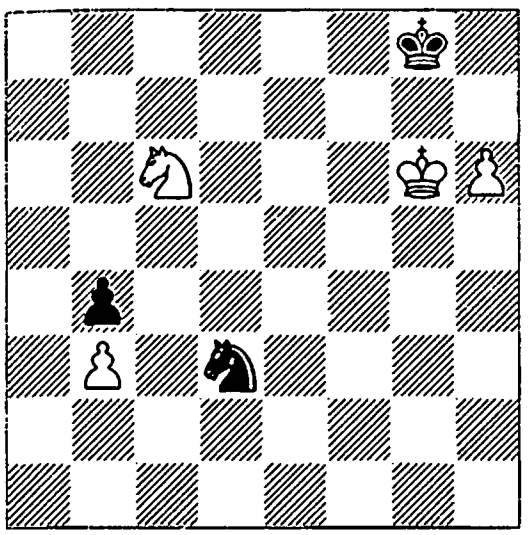
12 ♔d6

Allowing Black to eliminate the pawn, but it was a dead draw in any case.

12...♘h5 13 f5 ♘g7 14 f6 ½-½

The next position features an unusual knight chase based on stalemate.

W



S. Kalinitschew – Beckhuis
Bundesliga 2005/6

White is a pawn up and all his pieces are actively placed, so it looks as if a win is not far off. Indeed, White can immediately win the b4-pawn by stalemating Black's king on h8. However, it turns out that in this case Black has an amazing drawing resource which he overlooked in the game. Although the plan White adopted allows Black to draw, one can hardly criticize it as the draw is hard to spot, and it is doubtful if any other plan would have increased White's winning chances.

1 h7+ ♔h8 2 ♔h6 ♘e5!

2...♘f2! 3 ♘xb4 ♘g4+ is equally good.

3 ♘xb4 ♘g6?

Black plays to win the h7-pawn with ...♘f8, but this is too slow. He could have saved the game by 3...♘g4+ (3...♘f7+ 4 ♔g6 ♘e5+ is equally good) 4 ♔g6 and now there are even two ways to draw:

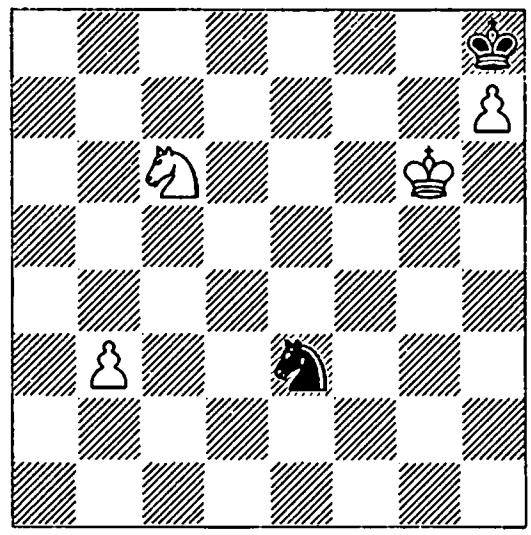
1) 4...♘e5+ 5 ♔f5 and now:

1a) 5...♘d7? 6 ♘d5! ♘b8 7 ♔g6! ♘c6 8 ♘f6 ♘e5+ 9 ♔h5! ♘c6 10 ♔h6 (the transfer of the king to h6 has deprived Black of an immediate knight check) 10...♘b4 11 ♘e4 ♘c6 12 b4 and the pawn advances, since taking it allows mate in two.

1b) 5...♘f7! (the only move) 6 ♘c6 ♘d6+ 7 ♔g6 ♘c4! transposes to line 2c.

2) 4...♘e3 5 ♘c6 *(D)* and now:

B



2a) 5...♘d5? loses to 6 ♘e5 ♘e7+ 7 ♔f7 ♘d5 8 ♘d7 ♘b4 9 ♔g6 and the b-pawn will soon advance; for example, 9...♘c6 10 ♘f8 ♘e7+ 11 ♔g5 ♘d5 12 ♔h6 ♘e7 13 b4 ♘f5+ 14 ♔g6 ♘d4 15 b5!.

2b) 5...♘g4? 6 ♔f5 ♘e3+ 7 ♔e4 ♘c2 8 ♔d3 and White wins as the knight is driven away from the b4-square, while Black's king is still very far away.

2c) 5...♘c4!! (the only move to draw) 6 ♔h6 (6 ♘e7 ♘e5+ 7 ♔f5 ♘d3! and White must either repeat moves or surrender the h-pawn, while 6 ♔f5 ♘a3 7 ♔e5 ♔xh7 is a draw as the black king can approach quickly) 6...♘e5! 7 ♘d8 ♘g4+ 8 ♔g6 ♘e5+ 9 ♔f5 ♘d3 10 ♘e6 ♔xh7 11 ♔e4 ♘c1 12 b4 ♘a2 eliminates the pawn.

4 ♘d5!

The only winning move.

4...♘f8

4...♘e5 5 ♘f6 ♘f7+ 6 ♔g6 ♘e5+ 7 ♔h5 ♘c6 8 ♔h6 is also a win for White.

5 b4

The pawn starts rolling.

5...♘xh7

5...♘d7 6 ♘f4 ♘e5 7 b5 is also easy.

6 b5 ♘f6 7 b6 ♘d7

Or 7...♘g4+ 8 ♔g5 ♘e5 9 b7 ♘d7 10 ♔g6 and ...♔g8 is impossible, so the white king can approach the b-pawn.

8 b7 ♘b8 9 ♘e7 ♘c6?!

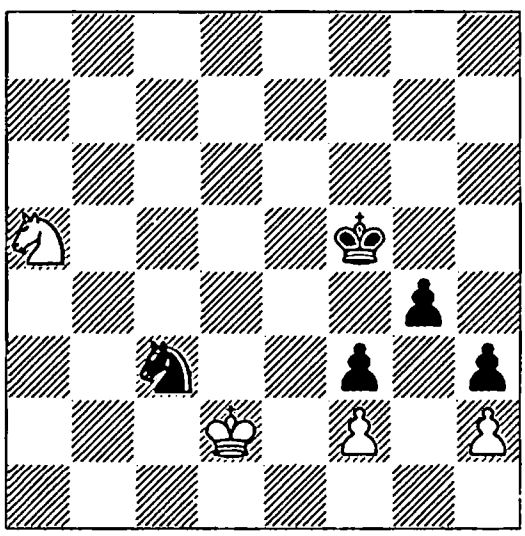
A hallucination, but even after 9...♘d7 10 ♔g6 ♘e5+ 11 ♔f6 ♘d7+ 12 ♔f7 ♘b8 13 ♔e6

the king supports the b-pawn and White wins easily.

10 ♘xc6 1-0

We have already seen the idea of a breakthrough in Section 2.3 (page 56), which dealt with king and pawn endings, and similar ideas can also occur in other types of ending. Here is an example with knights, which incidentally also contains an underpromotion.

B



Ardelean – Parligras
Romania 2005

Black is a pawn ahead, but his g-pawn is backward and once White gets his pieces to the kingside, the draw will be clear. Therefore Black must strike immediately.

1...g3!

This breakthrough should have been decisive.

2 fxg3 f2 3 ♘c4

The only chance.

3...♔e4?

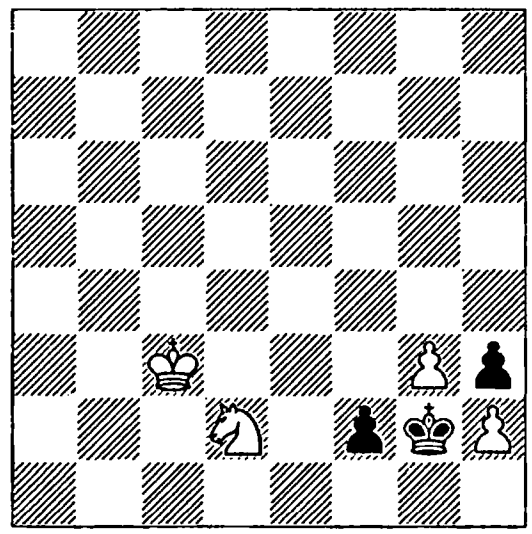
Sacrificing the knight is both unnecessary and incorrect. Black could have won by 3...f1♘+! 4 ♔xc3 ♘xh2 and the h-pawn will be decisive: 5 ♘d2 (after 5 ♘e3+ ♔e4 6 ♔d2 ♔f3 7 ♔d3 ♘g4 8 ♘f1 ♔f2 Black wins more quickly) 5...♘g4 6 ♘f3 (6 ♘f1 ♔e4 7 ♔d2 ♔f3 8 ♔e1 ♘e3 9 ♘d2+ ♔xg3 also wins for Black) 6...♘e5 7 ♘h2 ♔e4 8 g4 (8 ♔c2 ♔e3 9 ♔d1 ♔f2 followed by ...♔g2 traps the knight) 8...♔f4 9 g5 ♔g3 10 ♔d4 (10 ♘f1+ ♔g2 11 ♘e3+ ♔f2 12 g6 ♘xg6 13 ♔d4 ♘e5 and Black wins) 10...♘c6+ 11 ♔d5 ♔xh2 12 ♔xc6 ♔g3 13 g6 h2 and Black promotes with check.

4 ♔xc3 ♔f3

4...f1♘ 5 ♘d2+ ♘xd2 6 ♔xd2 ♔f3 7 ♔d3 is also a draw.

5 ♘d2+ ♔g2 *(D)*

W



6 ♔d3!

6 g4! also draws: 6...♔xh2 (6...f1♕? even loses after 7 ♘xf1 ♔xf1 8 g5 ♔g2 9 g6 ♔xh2 10 g7 ♔h1 11 ♔d2! h2 12 ♔e3 and White wins after promoting with check) 7 g5 ♔g2 8 g6 f1♕ 9 ♘xf1 ♔xf1 10 g7.

6...♔xh2 7 ♘f1+ ♔g2 8 ♔e2 h2 9 ♘xh2 ♔xg3 ½-½

Summary:

- Tactical ideas based on mate or stalemate arise occasionally in knight endings, in most cases when one king is confined on the edge of the board or in the corner.
- Since passed pawns are especially effective in knight endings, pawn breakthroughs to create a passed pawn can be an important factor, just as they are in pure pawn endings.
- It is important to keep an alert eye open for unexpected tactical ideas, especially towards the end of a long game.

4 Same-Coloured Bishop Endings

4.1 Introduction

This and the following chapter examine bishop endings. This chapter deals with same-coloured bishop endings and endings in which only one side has a bishop, while the following chapter covers opposite-coloured bishop endings.

We start in Section 4.2 (page 188) with positions in which a lone bishop faces a collection of enemy pawns. The basic positions are covered in many endgame books (see also *Understanding Chess Endgames*, Section 25), so here I shall content myself with a couple of more complex positions.

In Section 4.3 (page 190) the side with the bishop also has some pawns. The bishop usually wins when there are only one or two pawns for the bishop, but this is not an invariable rule and if some of the pawns are far-advanced, they can prove a match for the bishop. When the bishop faces three pawns, either side can have the advantage depending on the position. If the pawns are blockaded and have not advanced very far, then the bishop may still hold the upper hand, but if the pawns are already on the fifth rank, then the bishop side can normally only hope for a draw.

It is well-known that a rook's pawn and bishop not controlling the promotion square can't beat a lone king if the defender's king can occupy the promotion square. In Section 4.3.1 (page 194) we explore some of the consequences of this. This is quite a confusing subject, so we examine it in some detail. In particular, we consider cases in which the defender is hampered by his own pawns, and positions in which the defender's king is cut off from the queening square.

In Section 4.4 (page 199) we move on to positions in which both sides have a bishop. Some of the topics considered reflect those in other chapters of this book, while others apply specifically to bishop endings. One of the latter is the topic of the 'bad bishop', which we examine in detail in Section 4.4.1 (page 202). A *bad bishop* is one which is hindered by its own pawns, and can prove fatal regardless of other factors in the position. The defender's problems are proportional to the number of pawns he has fixed on squares of the same colour as his bishop; even two obstructive pawns can guarantee defeat. The defender's main hope is to set up a blockade which the attacker is unable to penetrate.

Stalemate occurs relatively often in bishop endings, and this is the subject of Section 4.4.2 (page 210). As usual, the chances of a stalemate increase when the defender's king is confined on the edge of the board, but mid-board stalemates are also possible. We have already met pawn breakthroughs in the two earlier chapters, and they can also arise in bishop endings, as we shall see in Section 4.4.3 (page 215). In a bishop ending, the key to victory is often the possibility of penetrating into the enemy position with the king, and it may be worth sacrificing a pawn to achieve this. Section 4.4.4 (page 217) gives a couple of examples of this idea.

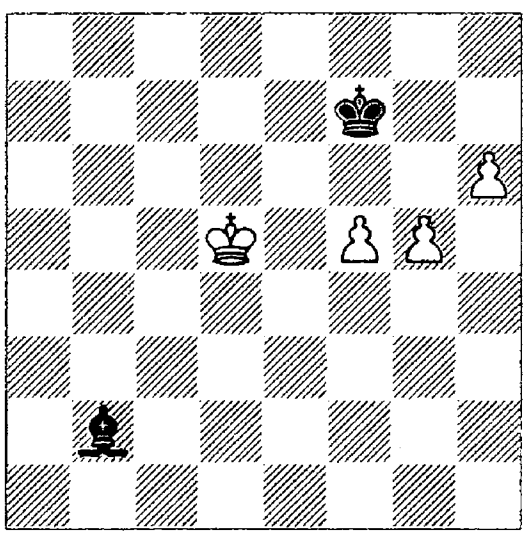
Section 4.4.5 (page 219) revisits a topic which has already arisen in earlier chapters – passed pawns. In a bishop ending, it is usually better to blockade an enemy passed pawn with the king rather than with the bishop, since if the king stands on a square of the opposite colour to the enemy bishop then it cannot be driven away. When both sides have dangerous passed pawns, play can become very tactical. Section 4.4.6 (page 225) follows up this topic by considering the case in which one player has an extra passed pawn.

Section 4.4.7 (page 229) deals with cases involving transformation into a queen ending.

There are some interesting examples in this section, including one in which the queen and bishop launch a mating attack after both sides promote. In Section 4.4.8 (page 233), we look at a selection of surprise moves, some of which were found and some overlooked.

4.2 Bishop vs Pawns

We examined some examples of this ending in *Understanding Chess Endgames* (Section 25) and here I would like to focus on a couple of more complex positions. The most important situation from the practical point of view is that of bishop vs three pawns. If the pawns are connected, then getting all three pawns to the fifth rank generally ensures victory, except if the pawns include a rook's pawn and the bishop controls the queening square of the rook's pawn. In this exceptional case, even getting all the pawns to the sixth may not win, but much depends on the precise position. The following example reveals some of the subtleties of this ending.



W

Bo. Nikolić – Mozetić
Yugoslavia 1991

What is surprising about this position is that White has a forced win, even though he has only one pawn on the sixth rank. As an example of how the position can be drawn even if all the pawns are on the sixth rank, take the above position and push the pawns to f6, g6 and h6, Black's king to g8 and White's king to g5. Then Black draws by 1...♗c1+! 2 ♔h5 ♗b2! 3 h7+ ♔h8 4 ♔g5 ♗xf6+ 5 ♔xf6 stalemate. We shall see this stalemate idea again in the game continuation.

1 ♔d6?

Mozetić's excellent analysis in *Informator 54* (fully verified by the database) demonstrates how White could have won: 1 h7! ♔g7 2 ♔e6!! (surprisingly, the only way to win is to sacrifice the h-pawn; in Doskocil-A.Cioara, Aschach 2001, with colours reversed, the finish was 2 g6? ♗c3 ½-½) and now:

1) 2...♔xh7 3 ♔f7 and there is no real defence to the threat of f6 followed by g6-g7; for example, 3...♗c3 4 f6 ♔h8 5 g6 ♗xf6 6 ♔xf6 ♔g8 7 g7 and White wins.

2) 2...♗c1 3 g6 ♗b2 4 f6+ ♗xf6 (4...♔h8 5 g7+ ♔xh7 6 ♔f7) 5 h8♕+ ♔xh8 6 ♔xf6 is decisive.

3) 2...♗c3 3 h8♕+ ♔xh8 4 ♔f7 ♔h7 5 f6 and the g-pawn runs through.

4) 2...♔h8!? 3 f6! (another 'only' move; 3 ♔f7? ♗c1! 4 g6 ♗b2 sets up the same stalemate defence as in the game, so that 5 f6 can be met by 5...♗xf6) 3...♗c3 (3...♗c1 4 g6 ♗g5 5 g7+ ♔xh7 6 ♔f7 and White wins) 4 ♔f7 ♗b2 5 ♔e8 (clearing the way for the f-pawn) 5...♗c3 (5...♔xh7 6 ♔f7 and 5...♗a3 6 g6 ♗f8 7 ♔f7 are also winning for White) 6 f7 ♗b4 7 f8♕+ ♗xf8 8 ♔xf8 ♔xh7 9 ♔f7 ♔h8 10 ♔g6 and White wins.

1...♗c1!

This isn't the only move to draw, but it is the clearest. Not, however, 1...♗c3? 2 g6+ ♔f6 3 ♔d7! (threatening to penetrate via e8 and f8) 3...♗d2 4 h7 ♔g7 5 f6+ ♔h8 6 ♔e6 ♗g5 7 g7+ and White wins.

2 g6+ *(D)*

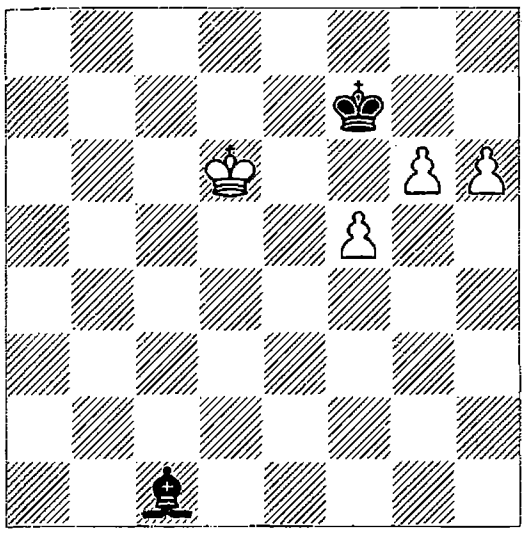
2...♔g8!

Accuracy is required since the other king moves lose: 2...♔f6? 3 h7 ♔g7 4 f6+ ♔h8 5 ♔e6 transposes to the analysis of 1...♗c3?, while after 2...♔f8?, 3 h7 ♗b2 4 ♔e6 (threatening f6) 4...♗g7 (4...♔g7 5 f6+ ♗xf6 6 h8♕+ wins for White) 5 f6 ♗h8 6 ♔f5 finishes Black off.

3 h7+ ♔h8

Perhaps surprisingly, this position is a draw.

4 f6



Otherwise Black plays ...♗b2 and can later sacrifice the bishop on f6 to force stalemate.

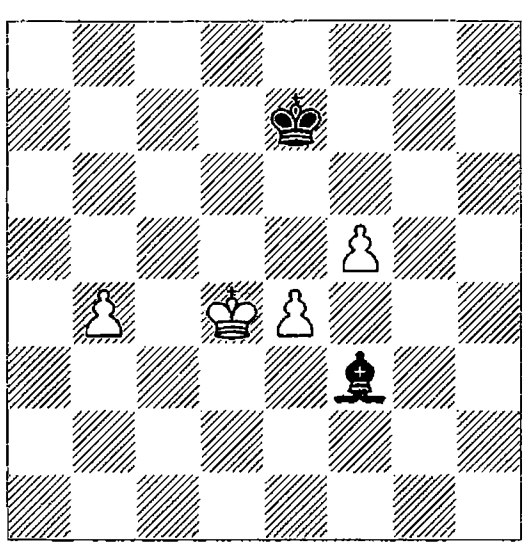
4...♗b2 5 ♔e6

5 g7+ ♔xh7 6 ♔e6 ♗xf6 and 5 f7 ♗a3+ 6 ♔e6 ♔g7 are also drawn.

5...♗xf6 ½-½

After White recaptures it is stalemate.

A bishop often struggles against three pawns if they are not connected and are reasonably far advanced. The following position is a marginal case which is close to the boundary between a win and a draw.



Eingorn – Luther
Erfurt 1994

The position is winning for White according to Eingorn's notes in *Informator 60*, but Black is able to draw provided he chooses the correct pawn to hold back.

1...♔f6?

Black had to choose between preventing b5 by playing ...♗e2 or preventing e5 by playing ...♔f6, and he made the wrong decision. 1...♗e2! was the only move to draw: 2 e5 ♗f1 and now:

1) 3 ♔d5 ♗g2+ 4 ♔c5 ♗e4 5 f6+ ♔e6 6 b5 ♗g6 7 b6 (7 ♔c6 is met by 7...♔xe5) 7...♗e4 8 ♔d4 ♗b7 9 ♔e3 ♗c6 (now Black has a perfect blockade) 10 ♔f4 ♗b7 11 ♔g5 ♗e4 12 ♔h6 ♔f7 and White cannot get through.

2) 3 ♔e4 ♗e2 (3...♗b5? loses to 4 ♔d5! ♗d3 5 f6+ ♔f7 6 ♔c6 ♗e4+ 7 ♔c7 ♗d3 8 ♔b6 ♔e6 9 b5 ♗c4 10 ♔c5 ♗e2 11 ♔c6 and the b-pawn advances; playing the bishop to b5 is wrong because Black must be ready to check the white king if it moves to d5) 4 ♔f4 (now 4 ♔d5 ♗f3+ 5 ♔c5 ♗e4 draws) 4...♗b5 5 ♔g5 ♔f7 6 e6+ ♔e7 7 ♔g6 (the crucial moment; there is only one move to draw) 7...♗c4! (Eingorn only analysed 7...♗d3?, which loses after 8 b5! ♗xb5 9 f6+ ♔f8 10 e7+ ♔e8 11 f7+ ♔xe7 12 ♔g7) 8 b5 (8 f6+ ♔xe6 9 f7 ♔e7 is also a draw) 8...♗xe6! and Black secures a draw.

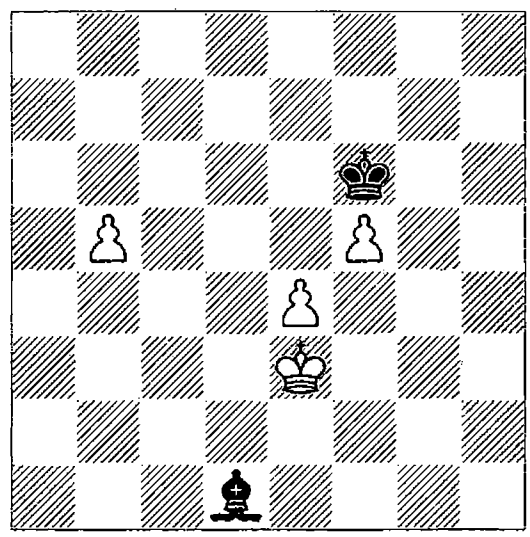
2 ♔e3

The immediate 2 b5 also wins: 2...♗e2 3 b6 ♗a6 4 e5+! ♔xf5 5 ♔d5 ♔g6 6 e6, etc.

2...♗d1

2...♗g2 3 b5 ♔e5 4 f6 ♔xf6 5 b6 is also winning for White.

3 b5 *(D)*



Once the pawn gets to b5, Black can only defend if he stops the pawn with his bishop and gets his king to e5, but there is no time for this.

3...♔e5 4 b6 ♔d6 5 ♔d4

5 e5+ was criticized by Eingorn, but actually this wins as well: 5...♔c6 6 e6 ♗b3 7 ♔d4 ♔xb6 8 e7 ♗f7 9 ♔e5 ♔c7 10 ♔f6 ♗e8 11 ♔e6 ♗d7+ 12 ♔f7, etc.

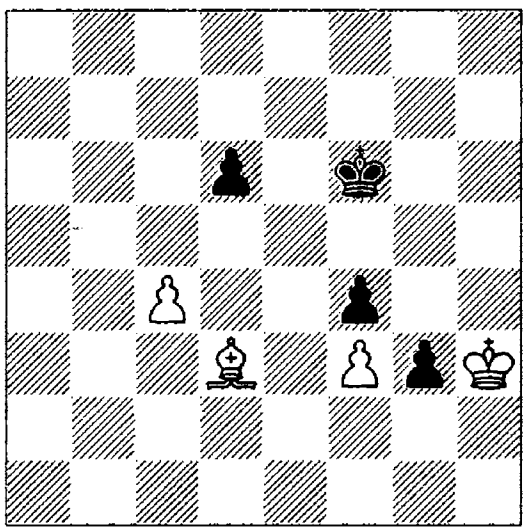
5...♗b3 6 f6 ♗a2 7 b7 ♔c7 8 ♔e5 1-0

White wins after 8...♗b3 9 b8♕+ ♔xb8 10 ♔d6 ♔c8 11 ♔e7.

4.3 Bishop and Pawns vs Pawns

Our first two positions deal with the case in which the side with the bishop is the attacker. If there are only one or two pawns for the bishop, then the bishop generally wins unless there are compensating advantages, such as dangerous passed pawns. However, even with one pawn for the piece, it sometimes requires some thought to find the winning line.

W



Sher – Lalić
Hastings 1994/5

Despite White's material advantage, Black's strong protected passed g-pawn makes progress difficult. White can of course play his bishop to f1 to hold back the pawn, but then Black just oscillates his king between g5 and h5 and White still cannot advance his own king. The only solution is to try to play White's king out to the queenside via the first two ranks.

1 ♗f1! ♔g5

Black must keep White's king bottled up or else he will lose the f4-pawn in a few moves.

2 ♗g2!

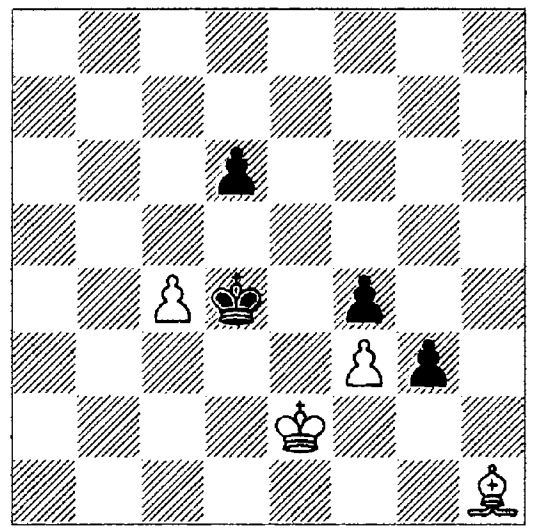
Surprising as it might seem, the only way forward is to play the bishop to h1, which looks like the least active square on the board. However, on this square the bishop not only restrains the g3-pawn, but also offers a clear path for White's king to reach the queenside. 2 ♔g2 ♔f5 3 ♔g1? ♔e5 4 ♗h3 is another way to free the king, but it is too slow; after 4...♔d4 5 ♗e6 (5 ♔f1 ♔xc4 6 ♔e2 ♔c3! is also a draw) 5...♔e3 6 ♔g2 ♔d2 Black's king is very active and White cannot make progress.

2...♔h5 3 ♗h1 ♔g5

Black's king must stay on g5 or h5 until the white king starts its march.

4 ♔g2 ♔f5 5 ♔f1 ♔e5 6 ♔e2 ♔d4 *(D)*

W



7 ♔d2!

White must occupy this key square. After 7 ♗g2 ♔xc4 8 ♗f1? (8 ♔d2 still wins) 8...♔c3! (now White actually has only one move to draw) 9 ♔d1! d5 10 ♔c1 g2! (other moves lose) 11 ♗xg2 ♔d3 12 ♔d1 ♔e3 13 ♔e1 d4 14 ♔f1 d3 15 ♔e1 d2+ 16 ♔d1 ♔f2 17 ♗h3 ♔xf3 the complications peter out to a draw.

7...♔xc4 8 ♗g2

Now it's time for the white bishop to re-emerge.

8...♔d4 9 ♗f1 d5

Black tries to prevent White's king from advancing for as long as possible.

10 ♗g2

White must lose a tempo with his bishop in order to place Black in zugzwang.

10...♔c4 11 ♗h3 d4

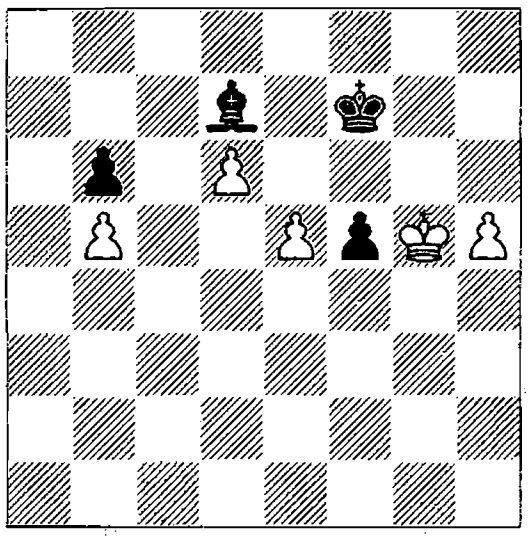
Or 11...♔d4 12 ♗f1! ♔e5 13 ♔d3 d4 14 ♗g2 ♔d5 15 ♗h3 ♔e5 16 ♔c4 and Black's pawns start to drop.

12 ♗f1+ ♔c5 13 ♔d3 ♔d5 14 ♗h3 ♔c5 15 ♗g2 ♔d5 16 ♗f1 1-0

After 16...♔c5 17 ♔e4 or 16...♔e5 17 ♔c4 Black will lose his pawns one by one.

In the following position White has two pawns for the bishop, but his three passed pawns pose a considerable danger, even if two of them are blockaded.

B



Fidel – Ramis
Spain 1980

According to the notes by Milić and Bozić in *Informator 30*, this position should be a draw, but Black can win provided he plays accurately.

1...♗c8!

The only move to win. 1...♗xb5?? loses to 2 h6 ♗d7 3 h7 ♔g7 4 h8♕+! ♔xh8 5 ♔f6 f4 6 e6, while 1...♗e6?? also gives away a whole point after 2 h6 f4 3 h7! ♔g7 4 h8♕+ ♔xh8 5 ♔f6 f3 6 ♔xe6 f2 7 d7 f1♕ 8 d8♕+ with an easily winning queen ending. 1...f4? is not quite so bad, but White draws easily by 2 ♔xf4 ♗xb5 3 h6 ♗d3 4 d7 ♔e7 5 e6 b5 6 ♔e5 b4 7 ♔d4 ♗f5 8 ♔c4.

2 ♔f4

Given a double question mark in *Informator*, but White is lost whatever he plays. The critical line runs 2 h6 f4 3 h7 (after 3 ♔xf4 ♔g6 Black wins much as in the game) 3...♔g7 4 h8♕+ ♔xh8 5 ♔f6 f3 6 e6 f2 7 d7 f1♕+ 8 ♔e7 ♗xd7 (8...♕c4 9 d8♕+ followed by ♕xb6 draws) 9 exd7 ♕e2+ 10 ♔d6 and now:

1) 10...♕xb5 11 d8♕+ ♔g7 12 ♕e7+ is an easy draw.

2) 10...♕d3+ 11 ♔c7 and White keeps his king to the left of the d-pawn, after which Black can no longer return to the winning position.

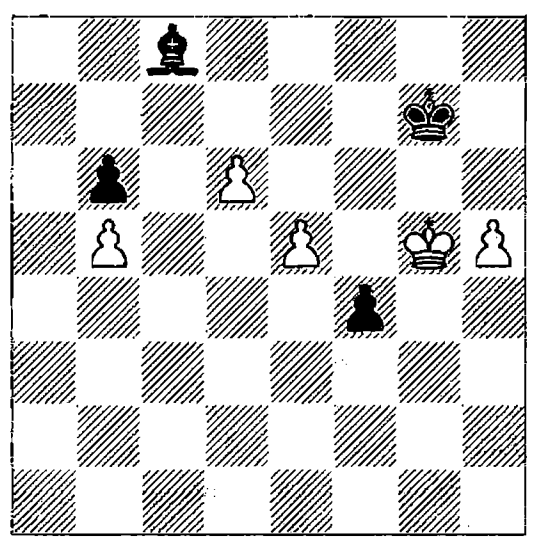
3) 10...♕h2+! (the only move to win; this was missed in the *Informator* analysis) 11 ♔e7 (11 ♔c6 ♕b8 also wins for Black) 11...♕c7 12 ♔e8 ♔g7! and White cannot promote due to mate on f7, so Black wins easily.

2...♔g7

Black's plan is to get his king to h6 and his bishop to e6, after which White's pawns will fall one by one.

3 ♔g5 f4! *(D)*

W



The key move and the only one to win. By deflecting the white king, Black gains access to the h6-square.

4 ♔xf4

4 h6+ ♔h7 5 ♔f6 f3 6 e6 f2 7 d7 f1♕+ 8 ♔e7 is hopeless when Black's king is not on the back rank; for example, 8...♗xd7 9 exd7 ♕xb5 10 d8♕ ♕g5+ 11 ♔d7 ♕xd8+ 12 ♔xd8 b5 and Black wins.

4...♔h6 5 ♔e4 ♗e6

White's king cannot penetrate unless he sacrifices a pawn.

6 ♔d4

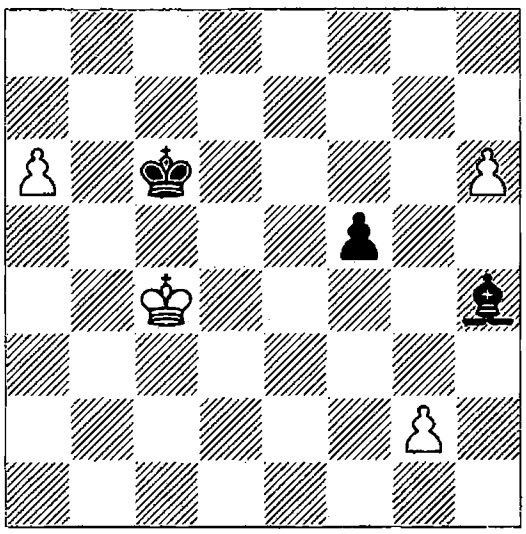
After 6 d7 ♗xd7 7 ♔d5 ♗xb5 8 ♔d6 ♗e8 9 ♔e7 ♗xh5 Black wins easily.

6...♔xh5 7 d7 ♗xd7 8 e6 ♗xb5! 0-1

Avoiding the final trap: 8...♗xe6? 9 ♔e5 ♗c4 10 ♔d6 ♗xb5 11 ♔c7 with a draw.

In our next position, the side with the bishop is on the defensive. Although White has only two pawns for the piece, they are passed pawns on opposite rook's files, which stretches Black's defence to the limit.

B



R. Scherbakov – Odeev
USSR 1987

Black found the drawing move, which, paradoxically, forces the white pawn to advance.

1...♗g5!

1...♔b6? loses because 2 ♔d5 ♔xa6 3 ♔e6 threatens h7 and Black must waste time bringing his bishop to the long diagonal: 3...♗e1 4 ♔xf5 ♔b5 5 g4 ♗c3 6 g5 ♔c6 7 g6 and White wins.

1...♗f6? also fails because with the pawn on h6, White can promote a pawn without the aid of his king by just pushing the g-pawn: 2 a7 ♔b7 3 ♔d5 ♗h8 4 ♔e6 f4 5 ♔f5 ♔xa7 6 ♔xf4 ♔b6 7 ♔f5 ♔c5 8 ♔e6 ♔d4 9 g4 ♔e4 10 g5 and White wins. Black must force the pawn to h7 first since then White will have to bring his king up in order to play g7.

2 h7 ♗f6 3 g3

After 3 a7 ♔b7 4 ♔d5 the only drawing move is 4...♗h8! and now 5 ♔e6 (5 g3 ♔xa7 also transposes to the game) 5...f4 6 ♔f5 ♔xa7 7 ♔xf4 ♔b6 8 ♔f5 ♔c5 9 ♔e6 ♔d4 10 g4 transposes to the game.

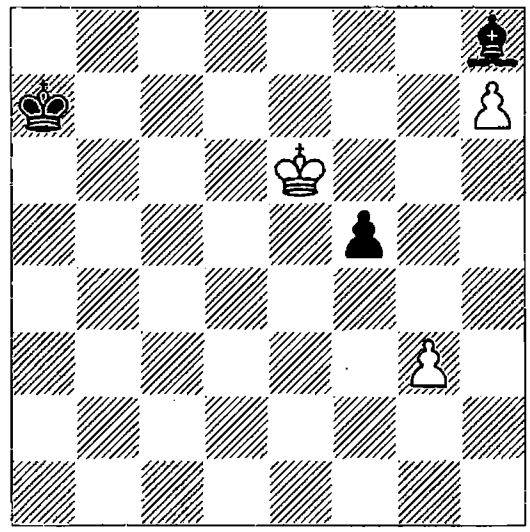
3...♗h8!

Rather surprisingly, this is the only move to save the game. 3...♗g7? loses because after 4 a7 ♔b7 5 ♔d5 ♔xa7 6 ♔e6 ♔b6 7 ♔xf5 ♔c5 8 ♔e6 ♔d4 9 g4 ♔e4 10 ♔f7 White gains a vital tempo by attacking the bishop.

3...♗a1? fails for a different reason: after 4 a7 ♔b7 5 ♔d5 ♔xa7 6 ♔e6 ♔b6 7 ♔xf5 ♔c5 8 ♔e6 Black cannot play ...♔d4 because it would interfere with his bishop.

4 a7 ♔b7 5 ♔d5 ♔xa7 6 ♔e6 *(D)*

B

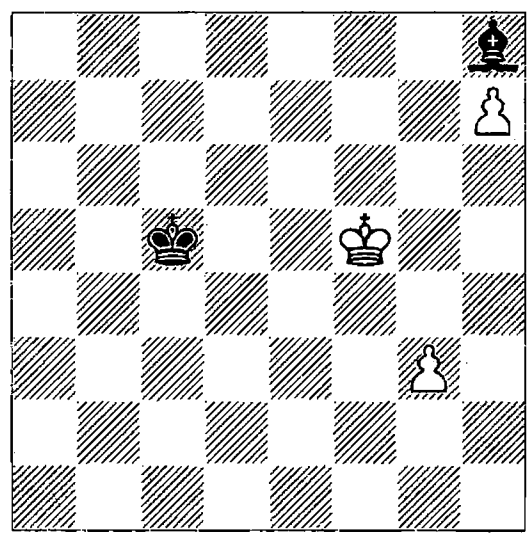


6...♔b6!

The only move since Black must play his king behind the white pawns. Other moves lose; for example, 6...f4? 7 gxf4 ♔b7 8 f5 ♔c7 9 f6 and the pawns cannot be stopped, or 6...♔b7? 7 ♔xf5 ♔c7 8 ♔e6 ♔d8 9 ♔f7 and the black king is kept at arm's length.

7 ♔xf5 ♔c5 *(D)*

W



8 ♔e6

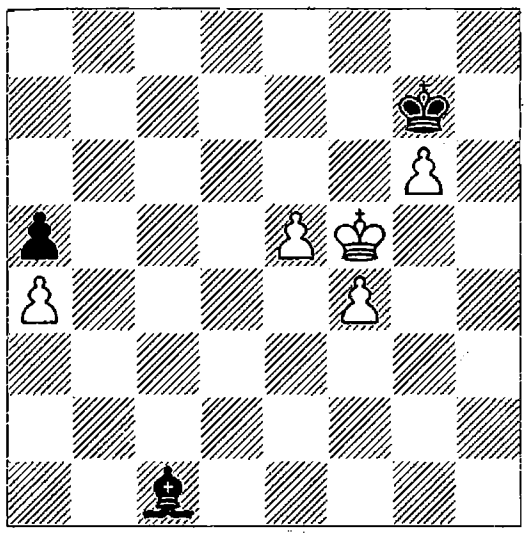
8 g4 ♔d6 9 g5 ♔e7 is also a draw.

8...♔d4 9 g4 ♔e4 10 g5 ♔f4 11 g6 ♔g5 12 ♔f7 ♔h6 ½-½

The black king heroically saved the day by marching right across the board.

When there are three pawns for the piece, either side can have the advantage depending on how advanced the pawns are and whether they are blockaded. The following position is finely poised between a draw and a win for White.

W



Meštrović – Kummer
World Under-26 Team Ch, Ybbs 1968

This position is winning for White according to Milić in *Informator 6*, but Black can draw with the correct plan. The first point is that White cannot hope to win using just his kingside pawns, since these can be blockaded; instead, he must advance the passed pawns as far as he can and then play his king to the queenside to attack the a5-pawn. Black can defend a5 with his bishop, but then White might be able to deflect the bishop using a kingside pawn. This will leave White with an a-pawn plus two kingside pawns against the bishop, which might offer winning chances. That's the idea, at any rate; as we shall see, correct defence by Black can prevent White from realizing this dream.

1 e6 ♗a3 2 ♔g5 ♗e7+!

The only move; otherwise White plays f5 and then marches his king to the queenside. In this case Black's king would be too far away to obstruct White's plan.

3 ♔h5 ♗f6?

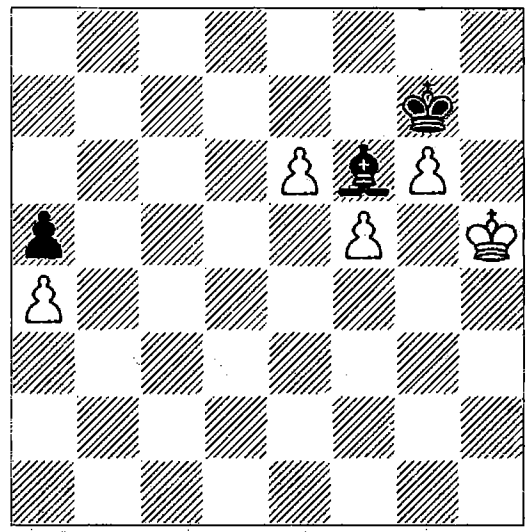
The losing move, allowing White to reach a position of reciprocal zugzwang with Black to play. Any move which allows Black to meet ♔e4 by ...♔d6 secures the draw; for example:

1) 3...♔f6! 4 f5 (4 ♔h6 ♗f8+ 5 ♔h7 was given as a win by Milić, but Black draws by 5...♔xe6! 6 g7 ♗xg7 7 ♔xg7 ♔f5) 4...♗f8! 5 ♔g4 ♗g7 6 ♔f4 ♔e7 7 ♔e4 ♔d6 8 ♔d3 ♗f6 9 ♔c4 ♔c6 10 e7 (the only winning try) 10...♔d7 11 ♔b5 ♗c3 and Black draws easily.

2) 3...♗d8 4 f5 ♗f6 (now the reciprocal zugzwang arises with White to play and the position is a draw) 5 ♔g4 ♔f8 6 ♔f4 ♔e7 7 ♔e4 ♔d6 8 ♔d3 ♔c7 9 ♔c4 ♔c6 drawing as before.

4 f5 *(D)*

B



Now White is winning as Black is in zugzwang. His problem is that he cannot move his king because then ♔h6 wins; for example, 4...♔f8 5 ♔h6 ♔g8 6 g7! ♗xg7+ 7 ♔g6 or 4...♔g8 5 ♔h6 ♗g7+ 6 ♔g5. However, he also cannot move his bishop along the long diagonal because then e7 wins, so he must play his bishop along the d8-h4 diagonal, but unfortunately this means giving up control of g7, leaving the g6-pawn to be controlled by the black king. The upshot is that Black no longer has time to meet ♔e4 by ...♔d6.

4...♗e7 5 ♔g4 ♗f6 6 ♔f4 ♔f8 7 ♔e4 ♔e7

Black is one tempo too late and White's king occupies the crucial d5-square.

8 ♔d5 ♗b2 9 ♔c5 ♗g7 10 ♔b5 ♗c3 11 g7 ♗xg7 12 ♔xa5

White's pawns cannot be blockaded because they are too far apart.

12...♗d4 13 ♔b5 ♔d6 14 a5 ♗e3 15 a6

Now Black's bishop is restricted to the a7-g1 diagonal, and White wins by playing his king back to support the connected pawns.

15...♗a7 16 ♔c4 ♗b6 17 ♔d3 ♗a7 18 ♔e4 ♗c5 19 ♔f4 ♗d4

19...♗g1 20 ♔g5 ♔e7 21 ♔g6 ♗d4 22 f6+ also wins for White.

20 ♔g5 ♔e7 21 ♔g6 ♗c5 22 f6+ ♔xe6 23 f7 1-0

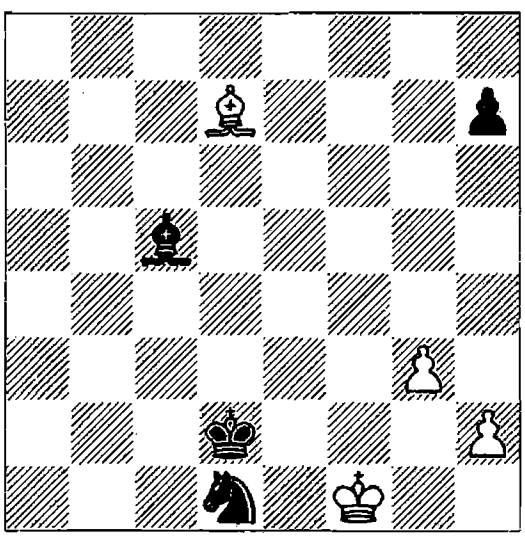
Summary:

- Two pawns are normally not enough compensation for a bishop, except if the pawns are far-advanced. However, if the attacker's pieces are poorly placed, the win may still require some effort.
- Three pawns roughly balance a bishop, but either side can have the advantage depending on the exact position.
- Three connected passed pawns are normally worth more than a bishop if they can reach the fifth rank.

4.3.1 Rook's Pawn and Wrong Bishop

One of the most famous of all positional draws is that in which a rook's pawn plus a bishop not controlling the pawn's queening square fail to win against a lone king. This drawing motif has enabled generations of players to save apparently hopeless positions. Oddly, though, this combination of material sometimes doesn't draw if the defender has some extra pawns, as in the following example.

B



Minasian – Van Wely
FIDE World Cup, Khanty-Mansiisk 2005

Black is a piece for a pawn up, but it is not clear if the position is a win. He has only one pawn left, and the h-pawn plus wrong bishop combination offers White some hopes of saving the game.

1...♗f2?

After this the position should be a clear draw. Black should have continued to manoeuvre in the hope of making progress with all the pieces on the board.

2 ♗a4!

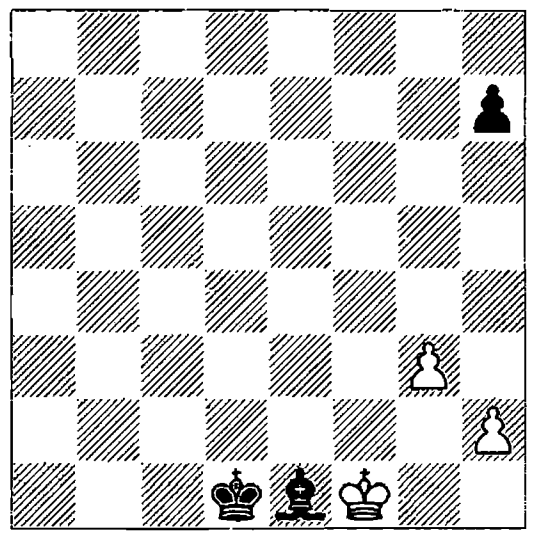
This forces the exchange of a pair of minor pieces and greatly eases White's problems.

2...♗e1

2...♘c3 3 ♔xf2 ♘xa4 4 ♔f3 is also drawn, as White has no trouble forcing the exchange of Black's last pawn.

3 ♗xd1 ♔xd1 *(D)*

W



Without the white pawns, the position could be agreed drawn immediately, but the pawns present a small danger for White. If, for example, he ended up with pawns on g3 and h4 against a black pawn on h5 and if his king were then to be stalemated, he would be forced to play g4, allowing ...hxg4 converting the h-pawn into a more useful g-pawn. This would not be stalemate because the h4-pawn would then be free to move. However, Black cannot force any such position and so long as White takes care with his kingside pawns there is little danger of running into this type of problem. The simplest draw is for White to keep his king in the h1-corner; for example, 4 ♔g1 ♔e2 5 ♔g2 ♗f2 6 ♔h1 (this is by no means forced since every other legal move draws, but we can see that even if White cooperates in trapping

his own king in the corner, Black still cannot win) 6...♔f3 7 h3 h5 8 g4 h4 9 g5 with an easy draw.

4 ♔g2 ♔e2 5 ♔h3?!

This does not yet lose, but White is making it harder for himself. Keeping the king close to h1 was much simpler.

5...♔f3 6 ♔h4?

And now White does throw away the half-point. His desire to play actively has led him down the wrong path and induced him to move his king far away from the safety of h1. He could still have drawn by 6 g4; for example, 6...♗f2 (6...h6 7 g5 h5 8 g6 draws at once) 7 g5 ♗d4 8 ♔h4 ♔f4 9 ♔h5 ♗g7 10 g6 h6 11 ♔h4 is safe.

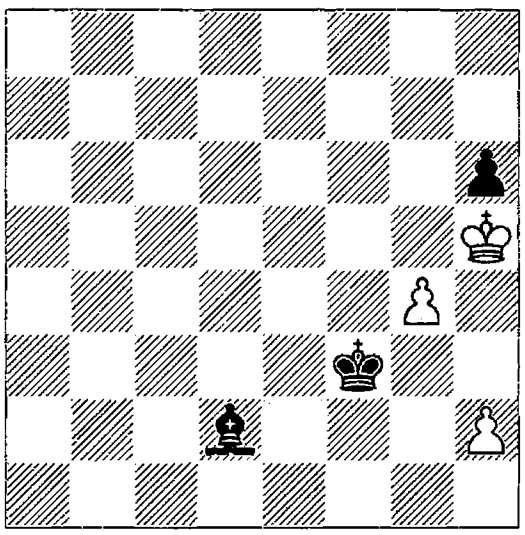
6...♗d2! 7 ♔h5

There is no escape, as 7 g4 h6 8 ♔h3 (8 ♔h5 ♗g5 transposes to the game) 8...♔f2 9 ♔h4 ♔g2 10 ♔h5 ♔xh2 11 ♔g6 ♔g3 12 ♔f5 ♗c1 and 7 h3 h6 8 g4 ♗g5+ 9 ♔h5 ♔g3 10 h4 ♔f4 both win for Black.

7...h6 8 g4 *(D)*

After 8 ♔h4 ♔g2 9 h3 ♔f3 10 g4 ♗c1 11 ♔h5 ♗g5 Black wins in the same way.

B



8...♗g5!

The only move to win, as otherwise White draws by h4 and g5.

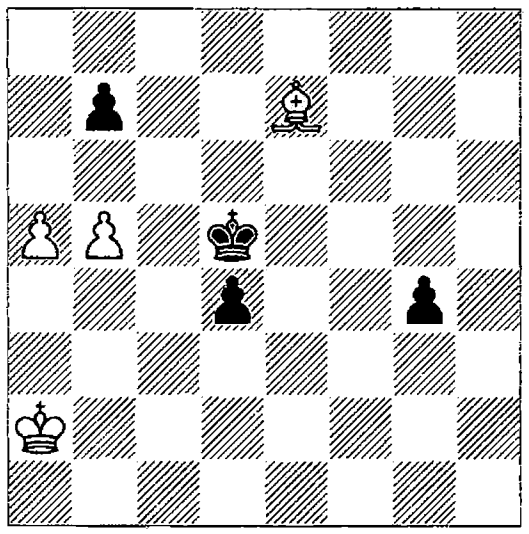
9 h4 ♔f4!

The unpleasant point. White must either take the bishop or lose both his pawns in a position where it is impossible for his king to return to h1.

10 ♔g6 0-1

The following example also shows a position in which the defender's pawn only gets in his way, but this time the arrangement of pawns is rather different.

W



Gažik – Stets
Hlohovec 1998

Here White is a piece up for only one pawn, but Black has drawing chances since White has a possible rook's pawn plus wrong bishop combination. Another drawing possibility is for Black to eliminate White's a-pawn and reach a position with White's sole remaining pawn on b6 facing a black pawn on b7. Even if Black has no other pawns, this is a positional draw provided Black can get his king back to c8. White can win in the diagram position, but avoiding these two positional draws requires accurate play.

1 ♔b3!

The best move, activating the king. 1 ♗h4? only draws after 1...♔c5 2 b6 ♔b5 3 ♗f2 ♔xa5 4 ♗xd4 ♔b5 5 ♔b3 ♔c6 and the king makes it back to c8, guaranteeing the draw.

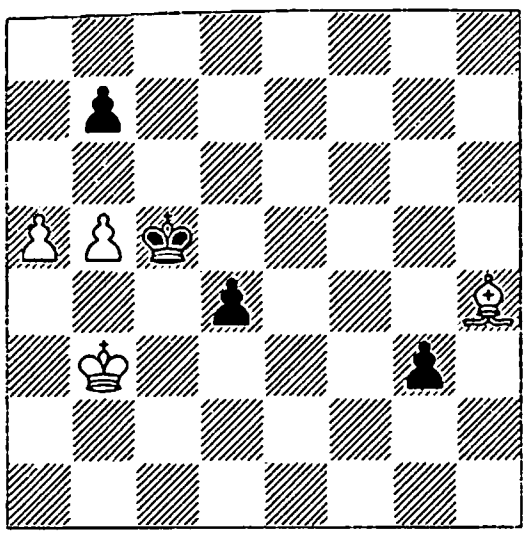
1...g3

Black must use this pawn to deflect the bishop, or else his king cannot approach the white pawns.

2 ♗h4 ♔c5 *(D)*

White also wins after 2...g2 3 ♗f2 ♔c5 4 b6! (after 4 ♔a4? ♔c4 White must play 5 ♔a3 or else he loses) 4...♔b5 5 ♗xd4 ♔xa5 6 ♔c4 and this time the white king is one square further forward and can prevent Black's king from reaching c8.

W



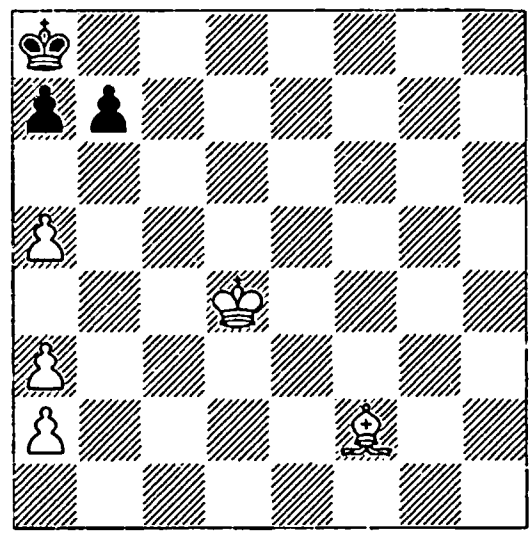
3 b6?

White keeps the wrong pawn and allows Black to draw. The winning line was 3 ♗xg3! ♔xb5 4 ♗c7 (this position would be an easy draw without the b7-pawn, but this pawn gets in Black's way and prevents him from retreating his king to a8) 4...♔c6 (4...♔a6 5 ♗b6 ♔b5 6 ♔c2 and White wins) 5 ♗b6! (the only winning move; 5 ♗d8? ♔d7 6 ♗b6 ♔c8 7 ♗a7 b5! leads to a draw after 8 axb6 ♔b7 or 8 a6 ♔c7, since in the latter case White cannot move his bishop, while the two pawns keep White's king at bay) 5...♔d7 (5...♔b5 6 ♔c2 ♔c4 7 ♗d8 d3+ 8 ♔d2 ♔d4 9 ♗c7 ♔e4 10 ♗b6 wins for White) 6 ♗xd4 (6 ♔c4? ♔c8 7 ♗a7 allows 7...b5+! 8 axb6 ♔b7 with another draw, but not 7...b6? 8 a6, when White wins) 6...♔c8 7 ♗a7 (just in time to prevent ...♔b8) 7...♔d7 (7...b6 8 a6) 8 ♔c4 ♔c7 9 ♔b5 (not 9 ♔c5? b6+ and Black escapes) and White wins.

3...♔b5 4 ♗xg3 ♔xa5 5 ♗c7 ♔b5 ½-½

In the next example, White can only win by sacrificing his bishop (*see following diagram*). The position would certainly be a draw without the black pawns, since White's bishop is the wrong colour for the a8-square, and then it doesn't matter how many a-pawns you have, the result is still a draw. However, the presence of the black pawns gives White a possibility to win by stalemating Black's king and forcing him to push the b-pawn in a situation where White can take it with one of the a-pawns, converting a useless a-pawn into a game-winning b-pawn.

W



Khasanov – Borisov
Russia 1995

1 a4!

This is the only move to win since Black was threatening to play ...b5. Then White is helpless, because even if he stalemates the black king and forces ...b4, he still won't be able to take the b-pawn because the stalemate remains, while if he meets ...b4 by a4, then Black presses ahead with ...b3 repeating the offer. By playing a4 himself, White prevents ...b5, since axb5 would give White a b-pawn.

1...♔b8

Black decides to wait. 1...b6 loses to 2 a6 ♔b8 3 ♔d5 ♔a8 4 ♔c6 ♔b8 5 ♔d7 ♔a8 6 ♔c7 b5 7 a5 b4 8 ♗b6! (this move is the key winning idea, as it lifts the stalemate and so enables White to meet ...b3 by axb3) 8...b3 9 axb3 axb6 10 ♔xb6.

2 ♔d5 ♔a8

2...♔c7 3 ♗xa7 ♔c8 4 ♔d6 ♔d8 5 ♗b6+ ♔c8 6 ♗c7 is an easy win, so Black must continue to defend the a-pawn.

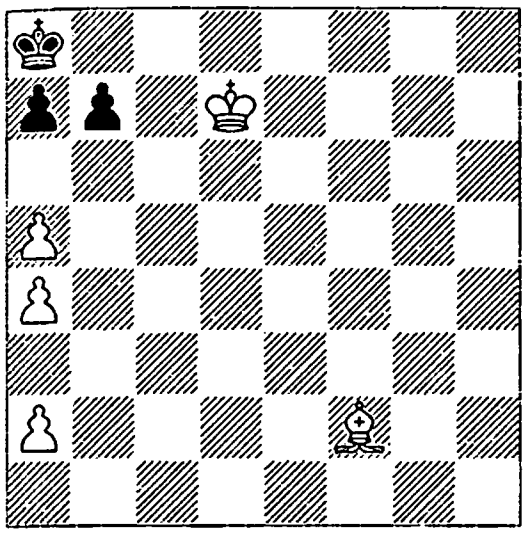
3 ♔d6 ♔b8 4 ♔d7 ♔a8 *(D)*

5 ♗h4

White must not fall into the trap 5 ♔c8? b5! 6 axb5 (6 axb6 axb6 7 ♔c7 b5 is also drawn) 6...a6 and White cannot prevent the elimination of his b-pawn. However, 5 ♗g3 leads to a somewhat quicker win after 5...b6 6 a6 b5 7 a5 b4 8 ♗f2 ♔b8 9 ♗b6 ♔a8 10 ♔c7.

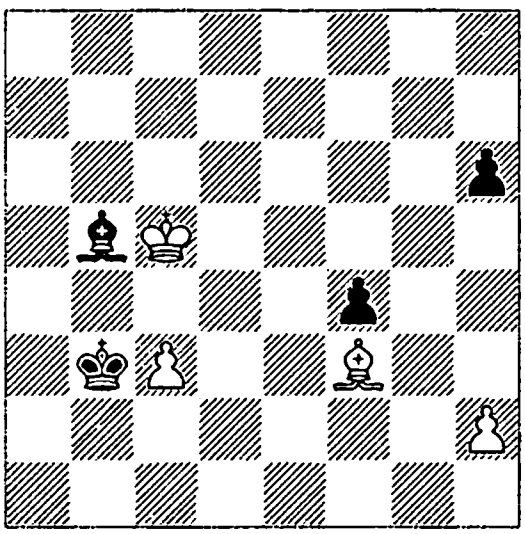
5...♔b8 6 ♗d8 ♔a8 7 ♔c8 b6

White also wins after 7...a6 8 ♗h4 ♔a7 9 ♗f2+ ♔a8 10 ♔c7 b5 11 axb6 a5 12 b7# or 7...b5 8 axb5 a6 9 a4.



8 a6 b5 9 a5 b4 10 ♗b6! b3 11 axb3 axb6 12 b4 ♔a7 13 ♔c7 bxa5 14 b5 1-0

In the basic ♗+♙ vs nothing situation, the attacker wins if the defender's king is cut off from the pawn's promotion square. If the defender has some pawns, the problem is often capturing these pawns without allowing the defender's king to slip back in front of the rook's pawn.



Kostro – Adamski
Poland 1972

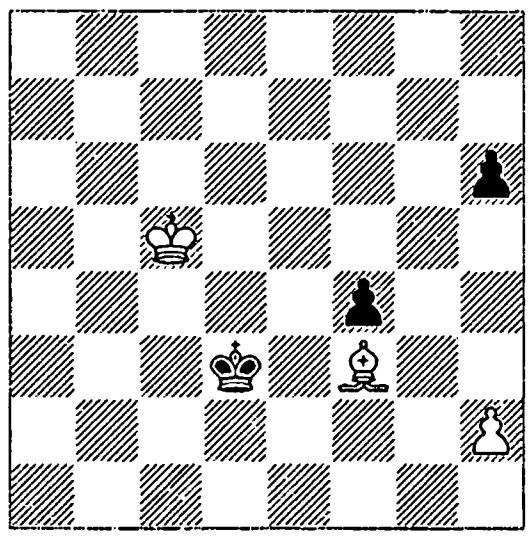
1 ♔xb5

According to Marić in *Informator 14*, this is a mistake allowing Black to draw, whereas 1 ♔d4, with the idea of ♗d5+ and c4, would have been very good for White. However, the exact opposite is true. Taking the bishop should lead to a relatively easy win for White, whereas 1 ♔d4? ♗d7! 2 ♗d5+ ♔c2 3 c4 ♗g4 4 ♔e4 f3 5 ♔e3 ♔c3 6 c5 f2! 7 ♔xf2 ♔d4 leads to a rapid draw.

1...♔xc3

If Black's king reaches h8 then he draws, even if he has lost both his pawns in the process. Therefore, White's objective must be to capture Black's h-pawn without allowing the enemy king to reach h8. The f-pawn is less important since White can always give up his bishop for it.

2 ♔c5 ♔d3 *(D)*



In order to understand this ending, you have to imagine that White's pawn is on h3 and Black's is on h4 and that White has taken the f-pawn. In endgame theory books you will find all sorts of complicated 'zones' describing exactly when White wins, but for our purposes it is enough to note that Black generally draws if:

1) He can get his king into the top half of the board and

2) Black can meet ♔g5 by ...♔e7 or ...♔e6 when White makes a run for the enemy pawn.

It is also important to note that if White's pawn is on h2 and Black's pawn is on h4 then White always wins provided Black's king cannot immediately reach h8. The reason for this is that in addition to the plan of winning Black's h-pawn, White has the additional plan of stalemating the black king, forcing ...h3, and then taking the h-pawn with the bishop. However, it is worth mentioning that some of these wins can be very long and difficult. Thus Black's aims are basically to force White to play h3 and get his king into the top half of the board. White must seek to prevent this.

3 ♔d6!

An excellent move, avoiding the subtle trap 3 ♔d5? ♔e3! 4 ♗e4 (White cannot play his bishop further down the long diagonal, and this costs him a vital tempo) 4...h5! 5 ♔e5 h4! (threatening ...h3) 6 h3 (6 ♗c6 f3 7 ♔f5 f2 8 ♗g2 ♔d4! is a clear draw because if the white king heads for either f2 or h4, the black king has time to reach h8) 6...f3 7 ♗c6 ♔d3! 8 ♗b5+ ♔c3! 9 ♔e4 ♔b4 and Black's king enters the top half of the board.

3...♔e3 4 ♗b7!

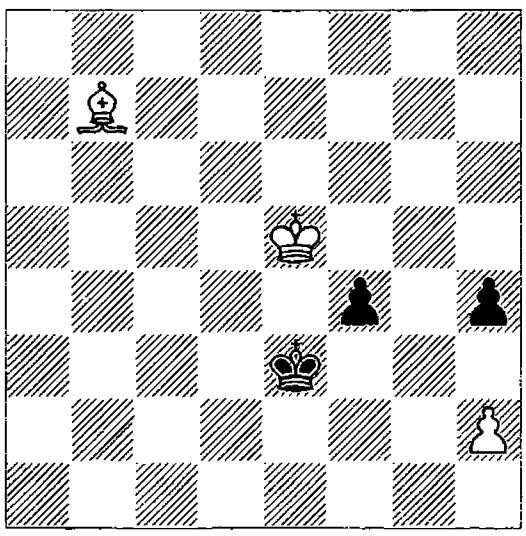
Another good move (4 ♗c6 is equally effective), giving space to switch to the a6-f1 diagonal and keeping the bishop far enough away to deny Black a tempo with his king.

4...h5

Marić gives this a double exclamation mark and believes that it leads to a draw, but this is incorrect. It is true that 4...f3?! loses more simply as after 5 ♔e5 f2 6 ♗a6 ♔f3 7 ♔f5 White easily rounds up the h-pawn.

5 ♔e5 h4 *(D)*

W

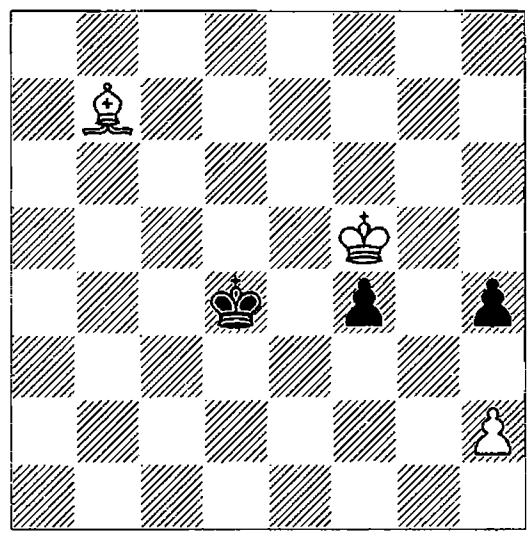


6 ♔f5?!

This does not yet throw away the win, but it makes it far more complicated. The correct approach was 6 h3! (this wins here because Black's king cannot reach the top half of the board) 6...♔d3 (after 6...f3 7 ♗a6! f2 8 ♗f1 ♔d2 9 ♔f4 White wins at once) 7 ♗a6+ ♔e3 (after 7...♔c3 8 ♔xf4 ♔d4 9 ♔g5 ♔e5 Black's king is in the top half of the board, but he has not been able to meet ♔g5 by ...♔e7 or ...♔e6, and so he loses because White can cut the king off with his bishop: 10 ♗c4! ♔e4 11 ♔xh4 ♔f5 12 ♔h5 ♔f6 13 ♔h6) 8 ♗f1! f3 (8...♔f2 9 ♔xf4) 9 ♗a6 f2 10 ♗f1 ♔f3 11 ♔f5 ♔e3 12 ♔g4 ♔e4 13 ♔xh4 ♔f5 14 ♔h5 ♔f6 15 ♔h6 and White wins as the black king cannot reach h8.

6...♔d4! *(D)*

W



Inching nearer the h8-square. White can win because his pawn still stands on h2 but, as noted above, this win is long and arduous.

7 h3?

We already know that this is a mistake from the general discussion above, and indeed it is the move which finally throws the win away. 7 ♔xf4 was best and after 7...♔c5 8 ♔e5 (Marić only considered 8 ♔g4 ♔d6 9 ♔xh4?, when 9...♔e7 10 ♔g5 ♔f7 draws) 8...♔b6 9 ♗f3 ♔c7 10 ♔e6 ♔d8 11 ♗c6 Black's king is cut off and White wins, but not at all easily. One line runs 11...♔c7 12 ♗d7 ♔b6 13 ♔d6 ♔b7 14 ♗e8 ♔b6 15 ♗c6 ♔a6 16 ♔c7 (this is a typical moment with the pawn on h2; 16...♔a7 loses to 17 ♗b7 forcing ...h3, so the king has to move in the wrong direction from Black's point of view) 16...♔a5 17 ♗d7 ♔b4 18 ♔d6 ♔c4 19 ♗c6 ♔b4 20 ♔d5 ♔a5 21 ♔c5 ♔a6 22 ♗e4 ♔a7 23 ♔c6 ♔a6 24 ♗d3+ ♔a5 (24...♔a7 25 ♔c7 ♔a8 26 ♗e4+ ♔a7 27 ♗b7 and White wins) 25 ♔c5 ♔a4 26 ♗c4 ♔a3 (26...♔a5 27 ♗b5 is the same idea again; by means of careful manoeuvring and threats to stalemate the king, White drives the black king into the bottom half of the board and then he can employ the winning technique from the situation with the pawn on h3) 27 ♗b5 ♔b3 28 h3 (Black's king is in

the losing zone, so White can push the pawn) 28...♔c3 29 ♗c4 ♔b2 30 ♔b4 ♔c2 31 ♗b5 ♔d2 32 ♔c4 ♔e3 33 ♔d5 ♔f4 34 ♗d3 ♔g3 35 ♗f5 ♔f4 36 ♔e6 ♔g5 37 ♗c2 ♔h5 38 ♔f6 ♔h6 39 ♗f5 ♔h5 40 ♔g7 ♔g5 41 ♗g4 ♔f4 42 ♔f6 ♔e4 43 ♗e6 ♔f4 44 ♗f5 ♔e3 45 ♔g5 and White takes the pawn next move.

7...♔c5 8 ♔e5 ♔b6 9 ♗d5 ♔c7 10 ♔e6 ♔d8 11 ♗c6 ♔c7 ½-½

White cannot even take the f-pawn without allowing the king to h8.

Summary:

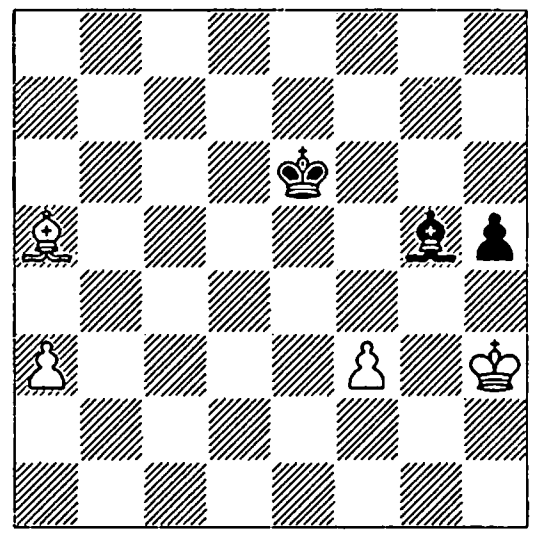
- The rook's pawn + wrong bishop draw is an important motif in many endings with a single bishop.
- If the defender has some additional pawns, the attacker can sometimes win positions that would otherwise be drawn by stalemating the defender's king, forcing him to commit suicide by pushing a pawn.
- If the defender's king is cut off from the rook's pawn's promotion square, the challenge for the attacker is to capture the defender's remaining pawns without allowing the king to reach the corner square. This isn't always possible and even when it is, elaborate manoeuvring may be necessary.

4.4 Bishop and Pawns vs Bishop and Pawns

We move on to endings in which both sides have a bishop, and the bishops move on squares of the same colour. I shall not follow the path of most endgame books by considering bishop and pawn vs bishop, then bishop and two pawns vs bishop, and so on. In keeping with the philosophy of the whole book, I shall be concerned more with important ideas than with an encyclopaedic case-by-case coverage.

The ending of bishop + pawn vs bishop is quite complicated and has an extensive literature. The basic ideas were dealt with in *Understanding Chess Endgames* (Sections 27 and 28) and a more detailed coverage may be found in *Secrets of Minor-Piece Endings* (Batsford, 1995). I shall not enlarge on this ending here.

Bishop and two pawns vs bishop is generally won. However, problems arise when the attacker possesses the rook's pawn plus wrong bishop combination. Although many positions are won even in this case, the win can be quite complicated.



W

Schüssler – Westerinen
Skien 1978

This is a fascinating position which was analysed in some detail by Schüssler in *Informator 27*. White can win the h-pawn by force, resulting in an ending with ♗+2♙ vs ♗. This would normally be an easy win, but here White is handicapped by having a rook's pawn plus wrong bishop, which means that Black will draw if he can give up his bishop for the f-pawn while still being able to reach a8 with his king. According to Schüssler, Black could have drawn this ending, but this is not the case.

1 ♗e1!

The first step is to play the bishop to h4 so as to force Black's bishop away from g5.

1...♔d5

Black will need his king near the a-pawn, while his bishop holds back the f-pawn.

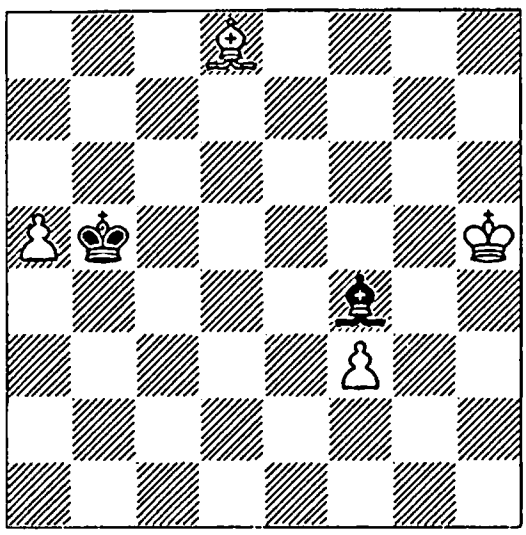
2 ♗h4 ♗c1

Black cannot restrain both white pawns and at the same time prevent White from playing ♔h4 and taking the h-pawn; for example, 2...♗d2 3 a4 ♔c6 4 ♗d8 ♔d7 5 ♗b6 ♔c6 6 a5 ♗g5 7 ♗f2 ♔b7 (7...♔b5 8 ♗h4 ♗d2 9 ♗d8 ♗e1 10 f4 is similar) 8 ♗h4 ♗d2 9 ♗d8 ♗e1 10 f4 and the f-pawn starts to advance. Therefore Black decides to surrender the h-pawn at once.

3 a4 ♔c4 4 ♗d8 ♔b4 5 a5 ♔b5 6 ♔h4 ♗f4 7 ♔xh5?! *(D)*

This move appears perfectly natural, but White could have simplified his winning task by playing 7 ♗g5!, followed by ♗d2, and only then ♔xh5. The bishop is better placed on d2 than on d8 because Black's bishop is obliged to stay on the b8-h2 diagonal, from which it can eventually be driven by ♔g4 followed by ♗e1-g3.

B



After the move played, White can win, but it is not easy. At some stage White will have to give up the a-pawn is order to deflect Black's bishop away from control of f4, but this only leads to a win in certain positions.

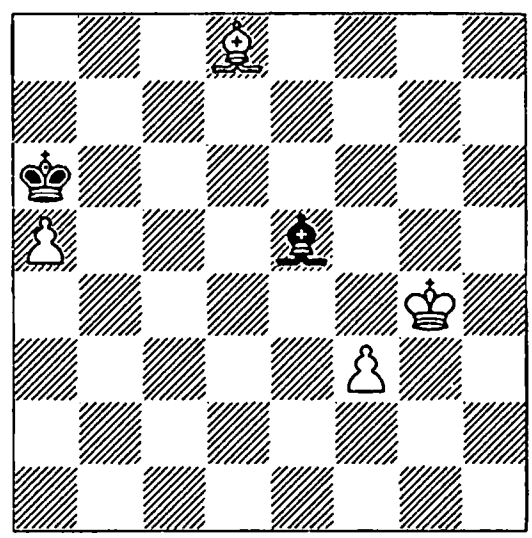
7...♗d2?!

This defence is inferior and makes life easy for White. It was better to keep the bishop on the other diagonal as long as possible, but this does not lead to a draw as Schüssler claimed: 7...♗e5 8 ♔g4 and now:

1) 8...♗d6?! (if the bishop moves anywhere on the b8-h2 diagonal, White can give up the a-pawn immediately; this line is an example of how White wins when the bishop is not on e5) 9 ♗h4! ♔xa5 10 ♗g3 ♗a3 11 f4 ♗b2 12 f5 ♔b5 13 ♗h4 ♔c6 (13...♔c4 14 ♔g5 ♔d3 15 ♔g6 ♔e4 16 ♗f6 ♗a3 17 ♗g7 ♗e7 18 ♗h6 ♔f3 19 ♗g5 ♗b4 20 f6 ♔g4 21 f7 ♗c5 22 ♗h6 ♗b4 23 ♔h7 ♔h5 24 ♗g7 ♔g5 25 ♔g8 ♔g6 26 ♗f8 ♗d2 27 ♗a3 ♗h6 28 ♗b2 also wins for White) 14 ♔g5 ♔d7 15 ♔g6 ♔e8 16 ♗g5 ♔f8 (an important position because it is one of the few cases in which White wins even though Black's king is in front of the pawn) 17 ♗f6 ♗a3 18 ♗g7+ ♔e7 (18...♔g8 19 f6 mates) 19 f6+ ♔e6 20 f7 ♗b4 21 ♗h6 ♗c5 22 ♔g7 ♗b4 23 ♔g8 ♔f5 24 ♗f8 ♗d2 25 ♗a3 ♗h6 26 ♗c1 and White wins.

2) 8...♔a6! *(D)* is the best defence, keeping the bishop on the optimum square e5.

W



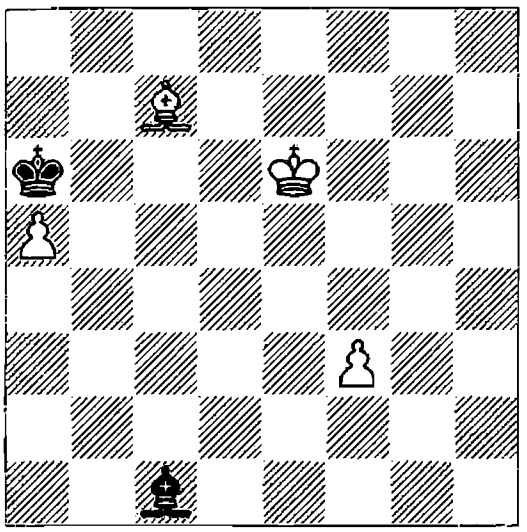
Now there are two moves to investigate:

2a) 9 ♗h4? was the only move Schüssler considered, but here it leads to a draw as Black's bishop is already controlling f6, which gives him an extra tempo: 9...♔xa5 10 ♗g3 ♗c3 11 f4 ♔b5 12 f5 ♔c6 13 ♔g5 ♔d5 14 ♔g6 ♔e4 (Black employs the typical strategy of playing his king behind the pawn; the extra tempo means that the king can reach the drawing square g4) 15 ♗h4 ♔f3! (the only move; 15...♗g7? loses to 16 ♗f6 ♗f8 17 ♗b2 ♗e7 18 ♗c1! followed by ♗g5, as in line 1 above, while 15...♔f4? loses to 16 ♗f6 ♗e1 17 ♗g5+ followed by f6) 16 ♗f6 ♗e1 17 ♗b2 ♗h4 18 ♗c1 ♔g4! and Black is just in time to prevent ♗g5, so the result is a draw.

2b) 9 ♔f5! (White need not give up the a-pawn straight away; instead he can improve his position by playing his king to d7 and then driving the enemy bishop off the b8-h2 diagonal with ♗c7; it will then have to settle on the inferior c1-h6 diagonal, when White can return with his king and win much as in the game) 9...♗h2 10 ♔e6 (10 ♔e4 ♗g3! 11 ♗b6 ♔b5 12 ♗d4? is wrong because after 12...♔xa5 13 ♗e5 ♗h4 Black's bishop is covering the crucial f6-square and so he can draw by accurate defence: 14 f4 ♔b4! 15 ♔d5 ♔b3! 16 f5 ♔c2! 17 ♔e6

♔d3 18 ♗f6 ♗e1 19 ♗d8 ♗c3 20 ♗c7 ♔e4 and the king is in time to prevent ♗e5) 10...♗f4 11 ♗b6 ♔b5 (11...♔b7 loses to 12 ♔f5 ♗g3 13 ♔g4 ♗e5 14 ♗f2 ♔a6 15 ♗g3 ♗c3 16 f4, when White has gained a decisive tempo because Black's king takes one move longer to capture the a-pawn; that's why Black's king must always stay on a6 or b5) 12 ♔d7 ♔a6 13 ♗c7 ♗c1 (the bishop is now on the inferior diagonal, so White's king returns) 14 ♔e6 *(D)* and now:

B



2b1) 14...♔b7 15 ♗b6 and then:

2b11) 15...♔a6 16 ♔f5 ♗a3 (the bishop can now return to the b8-h2 diagonal, but only on the inferior square d6 – when White's king is on f5, Black's bishop is best placed on g3) 17 ♔e4 ♗d6 18 ♗d4 ♔xa5 19 ♗e5 ♗e7 20 f4 ♔b4 21 ♔d5 ♔b3 22 ♔e6 (gaining an important tempo) 22...♗h4 23 f5 ♔c4 24 ♗d6 ♔d4 25 ♗e7 and White wins.

2b12) 15...♗f4 16 ♔f5 ♗d6 17 ♔g4 ♔a6 and White's manoeuvres have returned to more or less the original situation, but with the important difference that Black's bishop is no longer on the optimal square e5. Thus White can win by 18 ♗f2 ♔xa5 19 ♗g3 ♗a3 20 f4, etc.

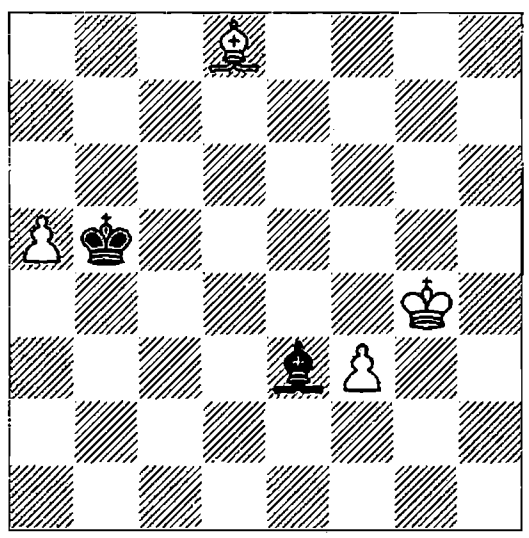
2b2) 14...♗d2 15 ♔f5 ♔b7 (15...♗b4 16 ♔g4 ♔b7 17 ♗b6 ♗d6 18 ♗f2 followed by ♗g3 and White wins as before, while 15...♗e3 16 ♔g4 ♗g1 17 ♗g3 ♗e3 18 ♗h4 ♔xa5 19 ♗g5 ♗d4 20 f4 ♔b5 21 f5 ♔c6 22 ♔h5 ♔d7 23 ♔g6 ♔e8 24 ♗h6 followed by ♗g7 is also decisive) 16 ♗b6 ♗c3 17 ♔g4 ♗e5 18 ♗f2 ♔a6 19 ♗g3 and again White wins.

8 ♔g4

This retains the win, but White could have given up the a-pawn straight away: 8 ♗g5! ♗xa5 9 f4 ♔c6 10 f5 ♗c3 (10...♔d7 11 f6 ♔e6 12 ♔g6 ♗c3 13 f7 ♗b4 14 ♔g7 ♗c3+ 15 ♔g8 ♗b4 16 ♗h6 ♔f5 17 ♗f8 ♗d2 18 ♗a3 ♗h6 19 ♗c1 and the pawn promotes) 11 ♔g6 ♔d5 12 ♗f6 ♗e1 13 ♗b2 ♗h4 14 ♗c1 ♔e4 15 ♗g5 and White wins.

8...♗e3 *(D)*

W

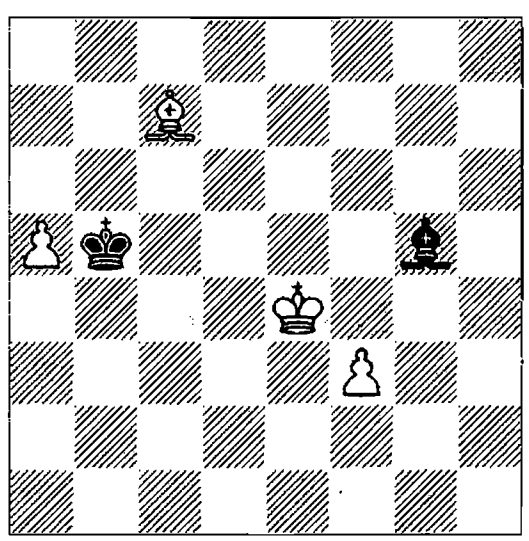


9 ♔f5

White is not sure how to proceed. With the bishop on the inferior c1-h6 diagonal, White need not manoeuvre further with his king and should instead strike at once by 9 ♗g5. In general, Black's best defence is to keep his bishop on e5 when White's king is on g4, while if the king moves to e4 then the bishop should stay on g5. In this way Black's bishop can always control f6 without loss of time.

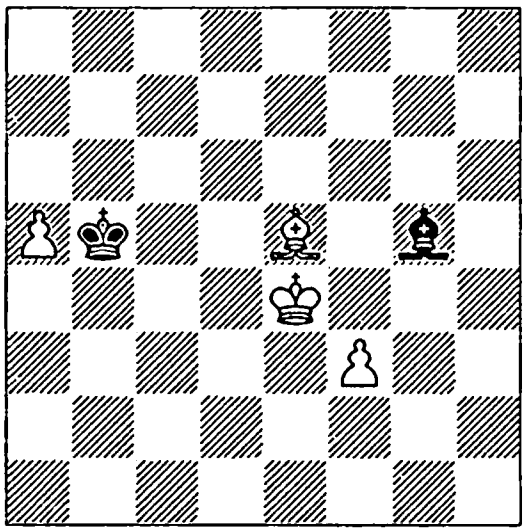
9...♗d2 10 ♔e4 ♗c1 11 ♗c7 ♗g5 *(D)*

W



12 ♗f4 ♗e7 13 ♗e5 ♗g5 *(D)*

13...♔xa5? loses quickly after 14 f4 ♔b6 15 ♔d5 ♔b7 16 ♔e6 ♗h4 17 ♗f6 ♗e1 18 ♔d7! ♔b6 19 f5 ♔b7 20 ♗e5 ♗h4 21 ♗d6 ♗f6 22 ♔e6 ♗c3 23 ♗e5 and the pawn advances.



14 ♗d4?

White chooses the wrong moment to give up the pawn, since Black's bishop is already controlling f6. White could still have won by 14 ♗c7! ♗c1 15 ♔f5 ♗e3 16 ♔g4 ♗g1 (16...♗d2 17 ♗d8 ♔a6 18 ♗g5 also wins for White) 17 ♗g3 ♗e3 18 ♗h4 ♔xa5 19 ♗g5 ♗d4 20 f4 ♔b5 21 f5 ♔c6 22 ♔h5 ♔d7 23 ♔g6 ♔e8 24 ♗h6 followed by ♗g7, etc.

14...♔xa5 15 ♗e3 ♗h4 16 f4 ♔b4

Black correctly heads for the rear of the pawn.

17 ♔f3

17 ♔d5 ♔c3 18 f5 ♔d3 19 ♗c5 ♗g5 20 ♔e6 ♔e4 also draws.

17...♔c4 18 ♔g4 ♗f6 19 ♔f5 ♗c3 20 ♔g6 ♔d3 21 ♗c1 ♔e4 22 ♔g5

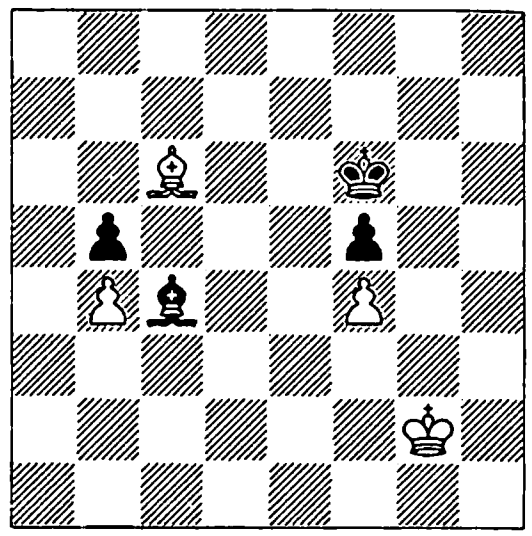
22 f5 ♔f3! 23 ♗g5 ♔g4 24 ♗f6 ♗e1 is an easy draw.

22...♗g7 23 ♔g6 ♗e5 24 f5 ♔f3 ½-½

4.4.1 Bad Bishop

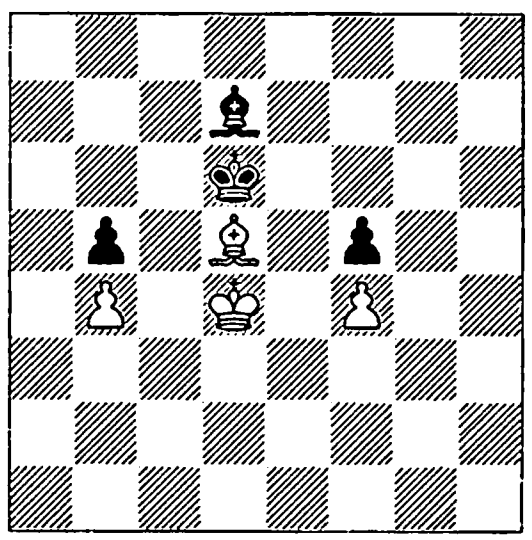
One of the most important factors influencing the power of a bishop is whether it is 'good' or 'bad'. A *bad bishop* is one hemmed in by its own pawns, while a *good bishop* is one which is not so obstructed. The situation is worse if the pawns are fixed in place, because then the bishop may be permanently impeded. In a bishop ending, the activity of one's bishop is crucial; it is, after all, your only piece apart from the king and if it is restricted then your whole position can be jeopardized.

In the following position, Black's bad bishop proved fatal despite the limited material on the board.



Pinter – Alterman
Beersheba 1991

Black is clearly worse here. Both his remaining pawns are stuck on the same coloured square as his bishop, so White is able to attack Black's pawns while Black cannot attack White's pawns – it's a classic bad bishop situation. Although there are no pawn moves, the analysis of this position is fairly complex, so there will be two preliminary positions before we return to tackle the diagram.



Pinter – Alterman
Analysis diagram 1

This is a target position for White because it is winning whoever moves first.

Suppose first that Black is to move. Then White wins after 1...♗e8 2 ♗b3 (threatening 3 ♗c2 ♗d7 4 ♗d3 with zugzwang; this ♗d3 vs ♗d7 position is the zugzwang which White is ultimately trying to achieve) 2...♗d7 3 ♗d1! (a typical zugzwang; whichever way Black moves his bishop, White can reach the ♗d3 vs ♗d7 position) 3...♗e6 (or 3...♗c6 4 ♗c2 ♗d7 5 ♗d3) 4 ♗e2 ♗d7 5 ♗d3 with zugzwang.

Now suppose that White moves first.

1 ♗b3 ♗c8

Other moves lose quickly; for example, 1...♗c6 2 ♗c2 ♗d7 3 ♗d3 with zugzwang, or 1...♗e8 2 ♗c2 and White wins after 2...♗g6 3 ♗d3 or 2...♗d7 3 ♗d3.

2 ♗f7! ♗b7

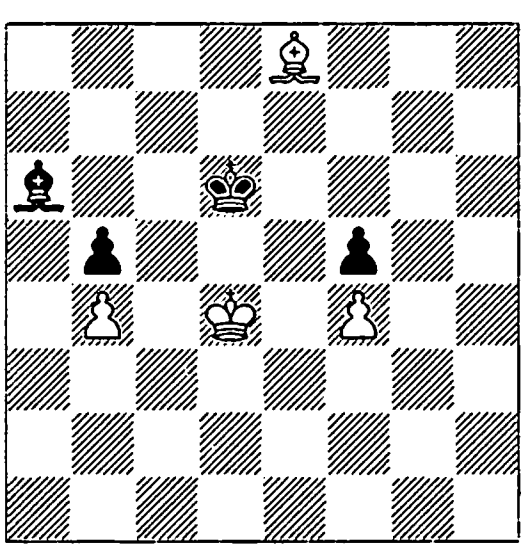
Other moves are even worse:

1) 2...♗a6 3 ♗e8 ♔e7 4 ♗g6 ♔f6 5 ♗h5 followed by ♔c5, winning.

2) 2...♗d7 3 ♗d5 reaches the diagram with Black to move, and so White wins as above.

3) 2...♔e7 3 ♗h5 ♔d6 4 ♗e2 ♗d7 5 ♗d3 and we are back to the basic zugzwang.

3 ♗e8 ♗a6 *(D)*



It might seem to be a battle of bishop vs bishop, but in this particular position White can throw a new element into the mixture – triangulation with the king.

4 ♔d3! ♔e7

Or 4...♔c7 (after 4...♔d5 5 ♗d7 White wins a pawn, while 4...♔e6 5 ♗c6! ♔d6 transposes to the main line) 5 ♔e3 ♔d6 6 ♔d4 (White has transferred the move to Black) 6...♔e7 7 ♗g6 ♔f6 8 ♗h5 and White wins.

5 ♗c6! ♔d6 6 ♗f3

Black appears to have a wide choice, but if he moves his king then White plays ♔d4, forcing the king back to d6, and then ♗e2 puts Black in zugzwang. Thus Black must move his bishop.

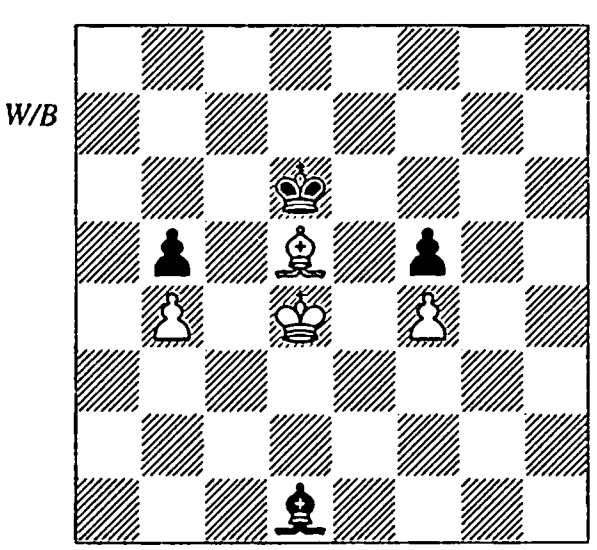
6...♗c8 7 ♔d4 ♗d7

7...♗e6 8 ♗e2 ♗d7 9 ♗d3 is zugzwang.

8 ♗d1

This is a position we have seen before, in which White wins after 8...♗c6 9 ♗c2 ♗d7 10 ♗d3 or 8...♗e6 9 ♗e2 ♗d7 10 ♗d3.

You will often find attempts in endgame books to analyse such positions based on the kind of corresponding-squares analysis we saw in Section 2.2.5 (page 45). In this type of analysis, the various positions of the bishops are examined to see which form reciprocal zugzwangs. The trouble with this method is that play is often not restricted to bishop manoeuvres; for example, in this example a triangulation by the white king played a crucial role in one line and without this White would not be able to win. Therefore the assumption that king manoeuvres will play no part may not be justified and can give rise to incorrect conclusions.



Pinter – Alterman
Analysis diagram 2

Here White also wins no matter who moves first. If Black is to play, then 1...♗e2 2 ♗b3 (there's nothing Black can do to prevent ♗c2)

2...♗h5 3 ♗c2 ♗g4 4 ♗d3 is winning for White, while 1...♗c2 loses in a symmetrical way: 2 ♗f3 ♗b3 3 ♗e2 ♗a4 4 ♗d3. Finally, 1...♗h5 2 ♗b3 ♗e8 3 ♗c2 ♗d7 4 ♗d3 leads to zugzwang.

Now suppose that White is to play:

1 ♗a2!

The threat is 2 ♗b1.

1...♗c2 2 ♗g8 ♗e4

2...♗d1 3 ♗d5 passes the move to Black, while 2...♗b1 3 ♗f7 ♔e7 4 ♗d5 ♔d6 5 ♗f3 followed by ♗e2 wins for White.

3 ♗h7! ♗b1 4 ♗g6 ♗c2 5 ♗e8 ♗a4 6 ♗h5 ♗b3 7 ♗e2 ♗a4 8 ♗d3

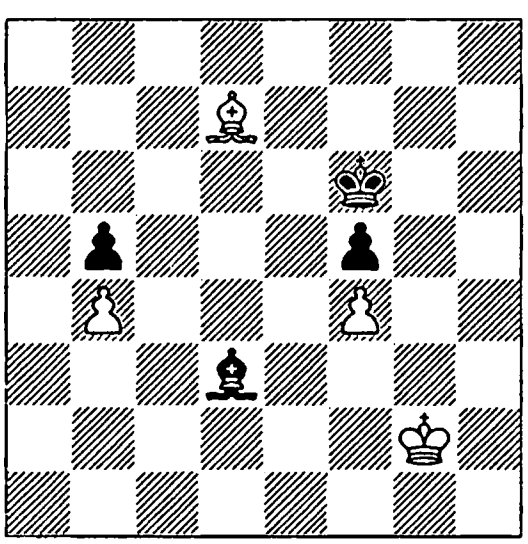
and White wins.

The conclusion is that once White's bishop occupies the dominant central square d5, Black is lost. It doesn't matter which half of the board Black's bishop is in and it doesn't matter who is to move; eventually Black will be forced into zugzwang and lose a pawn. This conclusion enormously simplifies what would otherwise be a very complex piece of analysis, because there are many defences for Black that we need not consider at all, since they allow White's bishop to reach d5.

The game position is a draw, but extremely accurate defence is necessary.

1 ♗d7 ♗d3 *(D)*

W



2 ♔f2

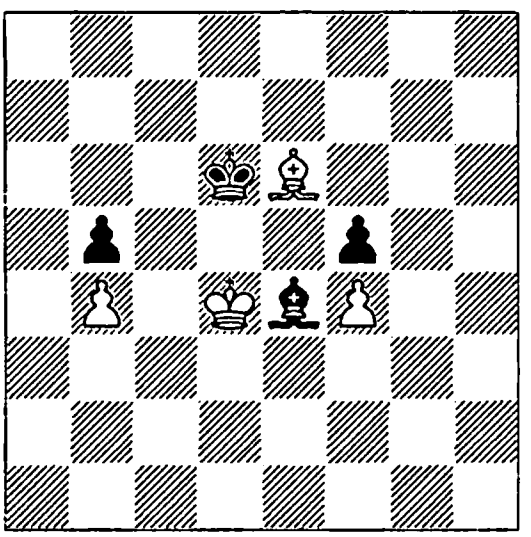
White first advances his king to the central square d4. This will keep Black's king pinned down to d6, since he cannot allow White's king to penetrate to c5 or e5.

2...♔e7 3 ♗c8 ♔d6 4 ♔e3 ♗e4 5 ♔d4 ♔c7!

For the moment Black's bishop is on a good square, defending f5 and controlling the key d5-square, so Black exploits the attack on White's bishop to keep his own bishop where it is.

6 ♗e6 ♔d6 *(D)*

W



7 ♗f7

As an example of how accurate Black needs to be, if White plays 7 ♗a2 then Black has only one drawing move, namely 7...♗b7! (not 7...♗c6? 8 ♗b1 ♗d7 9 ♗d3 and Black falls into zugzwang) so as to meet 8 ♗b1 ♗c8 9 ♗d3 with 9...♗d7, when the zugzwang has been avoided as it is White to move.

7...♗c6

7...♗b7? is wrong, as White wins by 8 ♗e8! ♗a6 9 ♔d3! transposing into analysis diagram 1 above.

8 ♗h5 ♗d5 9 ♗d1

White tries his luck with the bishop in the lower half of the board. 9 ♗e8 ♗c4 gets him nowhere.

9...♗b7

Pinter's analysis of this ending was generally good, but here he thought that 9...♗c4? also draws, although it loses to 10 ♗f3! ♗f7 (after 10...♗e6 11 ♗e2 ♗d7 12 ♗d3 White wins at once) 11 ♗g2! ♗c4 (we know 11...♗e8 12 ♗d5 is lost for Black thanks to our preliminary analysis, while 11...♗e6 loses to 12 ♗f1 ♗d7 13 ♗d3) 12 ♗h3 ♗e6 13 ♗f1 ♗d7 14 ♗d3 and White wins.

10 ♗e2 ♗c6 11 ♗f1 ♗e8!

The only move, as 11...♗d7? 12 ♗d3 is zugzwang.

12 ♗g2

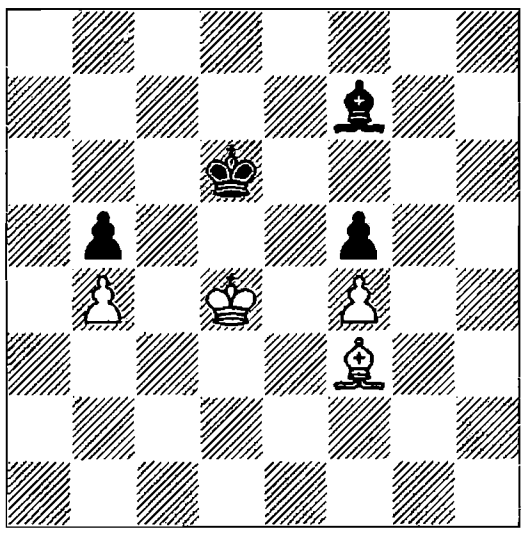
White has forced his way onto the long diagonal, but Black can still defend provided he puts his bishop on the correct square.

12...♗f7!

Again the only move, since Black must prevent ♗d5. This is a position of reciprocal zugzwang (see the note to Black's 9th move for the Black-to-play analysis).

13 ♗f3 *(D)*

B



13...♗e8?

Having defended accurately for so long, Black makes a fatal mistake. He also loses in the case of 13...♗b3? 14 ♗e2 ♗a4 15 ♗d3 or 13...♗e6? 14 ♗e2 ♗d7 15 ♗d3, while most other moves along the a2-g8 diagonal fail because Black is unable to defend the pawn after ♗e2.

13...♗c4! was the only move to draw. White can try various ideas, but they all come to nothing if Black continues to find the right square for his bishop; for example, 14 ♗h1 ♗a2 15 ♗g2 ♗f7! 16 ♗b7 (or 16 ♗h3 ♗g6) 16...♗e6 and White cannot make progress.

14 ♗b7

It's simpler to play ♗d5 directly, but this move maintains the win.

14...♗d7

There's no way out:

1) 14...♗h5 and 14...♗g6 are both met by 15 ♗d5.

2) 14...♔c7 15 ♗d5 ♔d6 16 ♗b3 ♗d7 (or 16...♗c6 17 ♗c2 ♗d7 18 ♗d3) 17 ♗d1 leads to a familiar zugzwang.

3) 14...♗f7 is the toughest defence, preventing ♗d5, but then White wins by 15 ♗c8! ♗g6 16 ♔d3! (this king triangulation is effectively the mirror image of the one in analysis diagram 1) 16...♔e7 (16...♔c7 17 ♗e6 ♔d6 18 ♗b3! ♗e8 19 ♔d4 ♗d7 20 ♗d1 is zugzwang, while after 16...♗h7 17 ♗a6 ♔c6 18 ♔d4 White penetrates with his king) 17 ♔c3 ♔d6 18 ♔d4 ♔c7 19 ♗e6 ♔d6 20 ♗b3 ♗e8 21 ♗c2 ♗d7 22 ♗d3 with zugzwang.

15 ♗d5!

Occupying the key square.

15...♗e8

15...♗c8 16 ♗f3 is analogous.

16 ♗b3 ♗d7

16...♗c6 17 ♗c2 ♗d7 18 ♗d3 and White wins.

17 ♗d1!

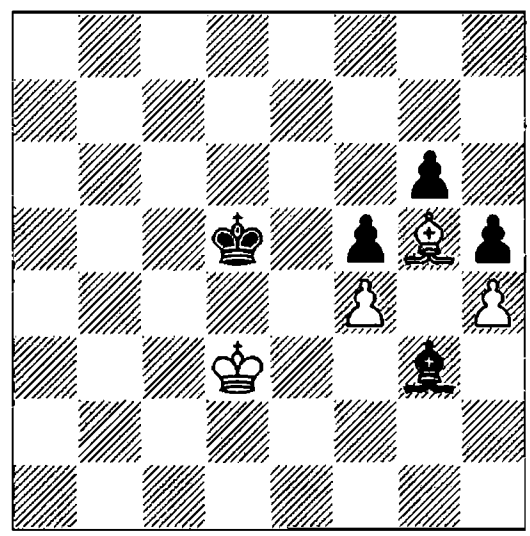
This familiar position arises again.

17...♗e6 1-0

After 18 ♗e2 ♗d7 19 ♗d3 a pawn finally falls.

A bad bishop can prove a serious handicap even when all the pawns are on one side of the board.

B



Westerinen – Timman
Haifa Olympiad 1976

This position has arisen more than once over the years and the correct result has been the subject of considerable debate. Black is a pawn

up and has the advantage that White's remaining pawns are both fixed on dark squares. On the other hand, the backward g-pawn is not much help at the moment and White's king is currently keeping the enemy king at bay. It turns out that if Black's king can penetrate to c4 then he will win, and it follows that White cannot move his king at all, since penetration to e4 would also be rapidly fatal. Thus White to play would be in zugzwang, since here he has no bishop move. However, it was Black to play in the game and this situation is more complex because there is no way to lose a tempo, since if Black plays ...♗h2, White simply replies ♗h6. I believe that the position is a win even with Black to play, but quite complex manoeuvres are required.

1...♗f2

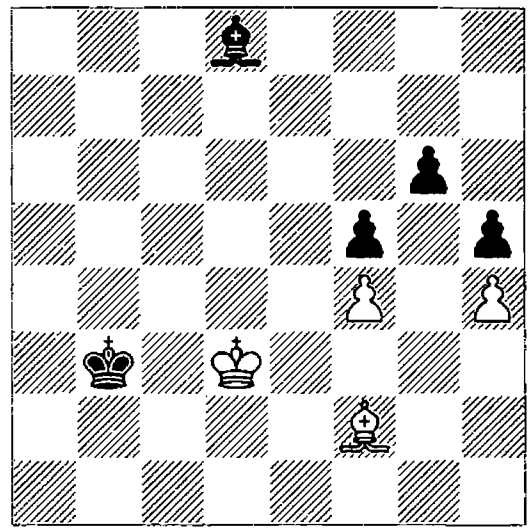
If Black can transfer his bishop to, say, d6 while the white bishop is still on g5, then White will have to move his king because ♗h6 can be met by ...♗e7.

2 ♔e2?!

This allows Black to complete the bishop transfer and makes the win much easier. The best defence was to play 2 ♗d8 ♗c5 3 ♗a5 ♗e7 4 ♗e1, transferring the white bishop to the other half of the board. Black cannot win by using his bishop alone, but must try to penetrate with his king to b2 and c1. If at any stage White allows the black king to occupy c4, then Black wins as in the game. The main line continues 4...♔c5 5 ♔c3 ♗f6+ 6 ♔d3 ♔b5 (this waiting move ensures that Black's king reaches b4, since any move by the white king allows ...♔c4) 7 ♗f2 ♔b4 8 ♗e1+ ♔b3 9 ♗f2 (9 ♗g3 ♗d8 is similar) 9...♗d8! *(D)* (certainly not 9...♔b2? 10 ♗d4+; it is more accurate to move the bishop to d8 rather than e7 because if White plays for a counterattack with ♔d4-e5-e6, then the position of the bishop on e7 will cost Black a tempo; in fact I think Black wins in any case, but 9...♗e7?! would introduce an unnecessary complication) and now:

1) 10 ♔d4 ♔c2 11 ♔e5 ♔d3 12 ♔e6 ♔e4 is hopeless for White when the bishop is on d8.

2) 10 ♗g3 ♔b2 11 ♔d2 (11 ♔d4 ♔c2 12 ♔e5 ♔d3 13 ♔e6 ♔e4 14 ♔f7 ♔f3 wins for Black) 11...♗a5+ 12 ♔d3 (12 ♔d1 ♔b3 and



W

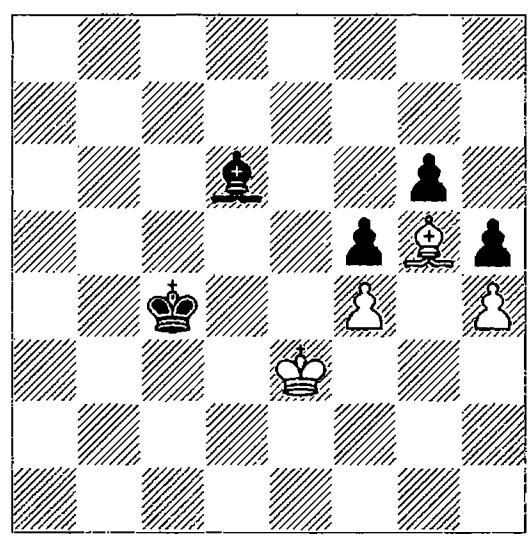
...♔c4) 12...♔c1 13 ♗f2 (after 13 ♔e2 ♔c2 14 ♗f2 ♗c7 15 ♗g3 ♔c3 16 ♔e3 ♗b6+ 17 ♔e2 ♗c5 Black's king penetrates to d4) 13...♔d1 14 ♗g3 ♗b6 and White is in zugzwang.

3) 10 ♗e1 ♔b2 11 ♗f2 (after 11 ♔d4 ♔c2 12 ♔e5 ♔d1 Black wins comfortably) 11...♔c1 12 ♔e2 ♔c2 13 ♗e1 (trying to prevent Black's king from reaching c4) 13...♗e7 14 ♔e3 (other moves allow ...♔c3 or ...♔d3) 14...♔d1 15 ♗g3 ♗c5+ 16 ♔d3 ♗b6 with the same zugzwang again.

2...♗c5 3 ♔d3 ♗d6

Now White has to move his king since 4 ♗h6 loses to 4...♗e7.

4 ♔e3 ♔c4 *(D)*



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Now the winning idea is to penetrate with the king via e1.

5 ♗f6 ♗c7

A waiting move to force White's bishop to abandon its control of d4.

6 ♗g5 ♗b6+ 7 ♔e2 ♔d4 8 ♔f3 ♔d3

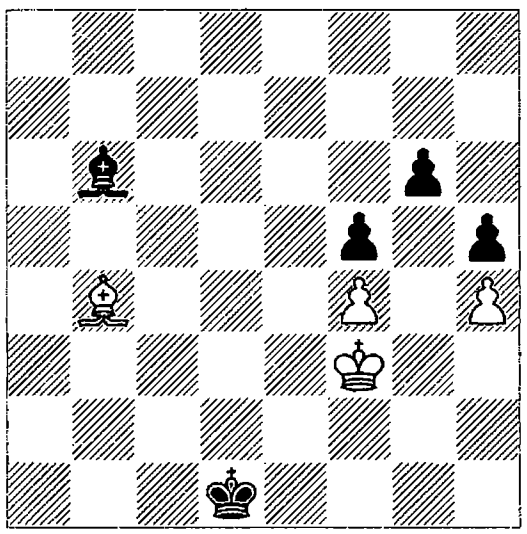
Another step forwards.

9 ♗e7 ♔d2 10 ♗b4+

White does his best to stop the king's march, but to no avail.

10...♔d1 *(D)*

W



11 ♗c3

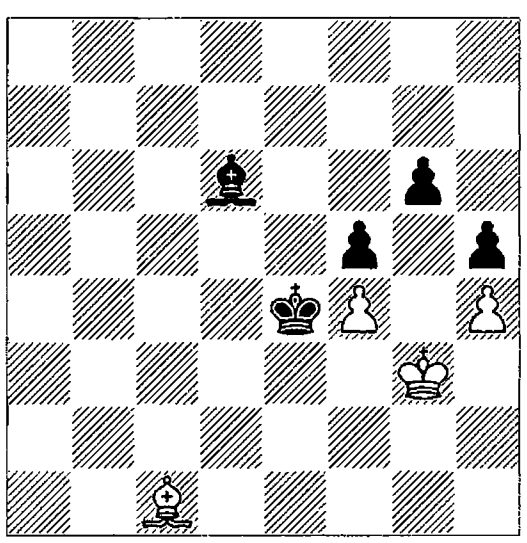
Or 11 ♗e7 ♔e1 12 ♗f6 ♔f1 13 ♗e7 ♔g1 14 ♔g3 ♗f2+ 15 ♔f3 (Black also wins after 15 ♔h3 ♗e1 16 ♗c5+ ♔f1 17 ♗b6 ♔e2 followed by ...♔f3) 15...♗e1 16 ♔e2 ♗g3 17 ♔f3 ♔h2 followed by ...♔h3 and the h-pawn falls.

11...♗d8 12 ♔g3 ♔e2

There's no way to prevent the king from advancing step by step.

13 ♗b4 ♔e3 14 ♗c5+ ♔e4 15 ♗b4 ♗c7 16 ♗d2 ♗d6 17 ♗c1 *(D)*

B



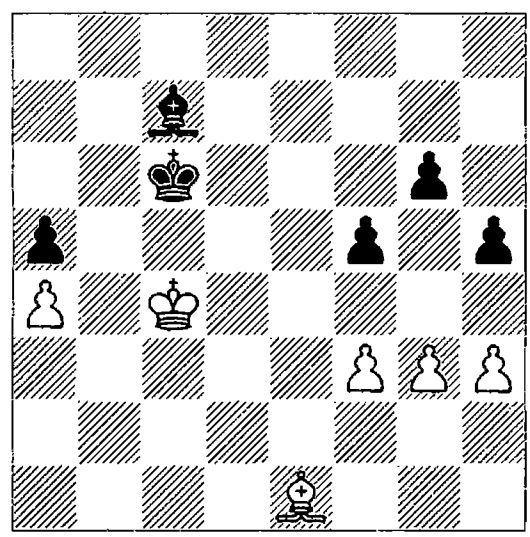
17...♗c5

Heading for e3.

18 ♗b2 ♗e3 19 ♗e5 ♗d2 20 ♗d6 ♗e1+ 21 ♔h3 ♔f3 22 ♗e5 ♗d2 0-1

In the following position White has two slight advantages in that his king is marginally the more active and Black's a-pawn is stuck on a dark square. Although it appears unlikely that this will be sufficient to win, Black has to defend accurately to hold the game. In particular, he must avoid having a second pawn stuck on a dark square.

W



Cvetković – Savanović

Divcibare 1994

1 ♔d4 ♔d6!

According to Cvetković's notes in *Informator 61*, this is the losing move, and Black should have played 1...g5. This is exactly the wrong way round. The move played is the most accurate and, if it had been followed up correctly, it would have been adequate to save the game. 1...g5? is inferior, and after 2 g4 (now the pawn on g5 is also fixed on a dark square and Black is in serious trouble; if he loses a pawn without compensation, then he will lose the game even though White has a rook's pawn plus wrong bishop combination) 2...hxg4 3 hxg4 fxg4 4 fxg4 ♗d8 5 ♔e5 (5 ♔c4 ♗c7 6 ♗c3! is also enough to win; for example, 6...♗d8 7 ♗d2 puts Black in zugzwang, while 6...♗b6 7 ♗f6 ♗e3 8 ♔d3 ♗c1 9 ♗d8 wins a pawn for White) 5...♔c5 6 ♔e6 ♔c4 7 ♔d7 ♗b6 (7...♗f6 8 ♗xa5 ♔b3 9 ♗d8 and White wins) 8 ♗d2 ♔b3 9 ♔c6 ♗d8 10 ♔b5 followed by ♗xa5 Black is dead lost.

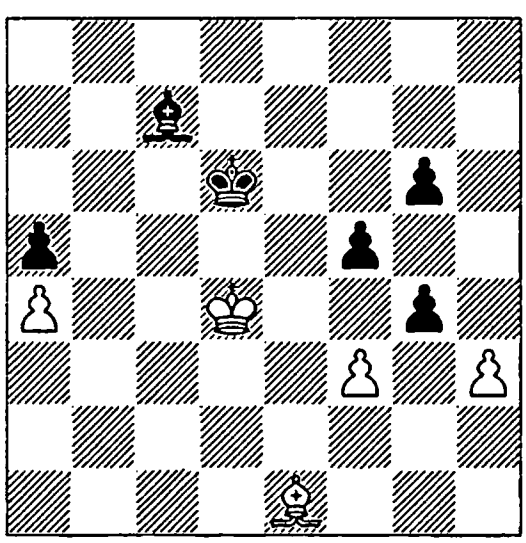
2 g4

White has to play this at some stage or else he will be tied down to the defence of the g3-pawn.

2...hxg4 *(D)*

This is clearly the most natural move, but it does allow White to liquidate into a pawn ending. The odd thing is that Black correctly decided to allow the pawn ending, but thanks to a mistake later on he lost this ending rather quickly. If Black wanted to avoid the pawn ending, he could have done so quite easily by checking first on b6 and only then exchanging pawns on g4, which is also a comfortable draw. The only thing Black must avoid is allowing White to exchange pawns himself; for example, after 2...♔c6? 3 gxh5 gxh5 4 ♗d2 Black is already in zugzwang and must allow the white king to penetrate, with the ensuing loss of a pawn.

W



3 ♗g3+ ♔c6

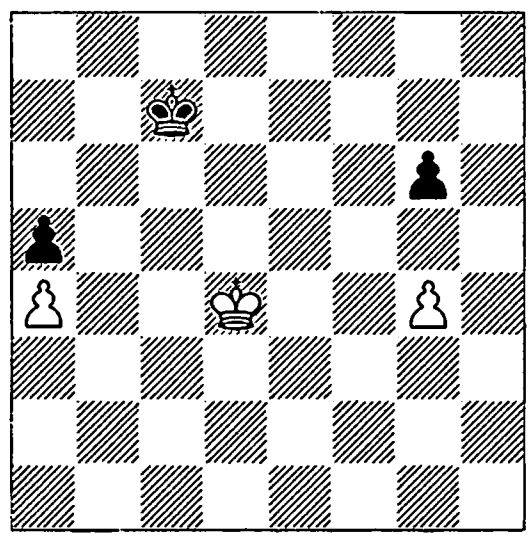
It's curious how many drawing lines Cvetković fails to give in his notes. Here 3...♔e6 4 ♗xc7 gxh3 is also a draw; if the f-pawn is exchanged then Black only has to get his king to a8 to draw, since White's bishop is the wrong colour for the a-pawn, but on the other hand if White meets ...g4 by f4 then Black has two connected passed pawns on the kingside. The analysis runs 5 ♔e3 (after 5 ♔c5 g5 6 ♗h2 f4 7 ♔d4 ♔f5 8 ♔d3 ♔e6 9 ♔e4 ♔f6 White cannot make progress) 5...♔d7 6 ♗b8 g5 7 ♔f2 g4 8 f4 ♔c6 9 ♗e5 ♔c5 10 ♗c3 ♔c4 11 ♗xa5 ♔b3 12 ♔g3 ♔xa4 13 ♗e1 ♔b5 and Black is in no danger. There's also nothing wrong with the move played.

4 ♗xc7 ♔xc7

Here 4...gxh3? is insufficient to draw, as White's king can penetrate towards the kingside pawns: 5 ♗h2 ♔d7 (5...g5 6 ♔e5 g4 7 f4 is an easy win for White) 6 f4 ♔d6 7 ♗g3 and White's king gets amongst the pawns.

5 hxg4 fxg4 6 fxg4 *(D)*

B



The key moment. Where should Black move his king?

6...♔d6?

This is the losing move. Cvetković doesn't mention 6...♔c6!, which would have drawn: 7 ♔e5 (7 ♔c4 g5 draws at once) 7...♔c5 8 ♔f6 ♔b4 9 ♔xg6 ♔xa4 and both sides promote at the same time. This position is simply a matter of the opposition; there's one reserve tempo on the kingside which can be taken by either player. Black should therefore take the 'anti-opposition' so that when the reserve tempo is taken (if White doesn't take it right away, Black can on his next move) Black is the one to gain the opposition. As always, such general arguments need to be supplemented by concrete analysis, but the general arguments can guide you towards the lines you should be analysing.

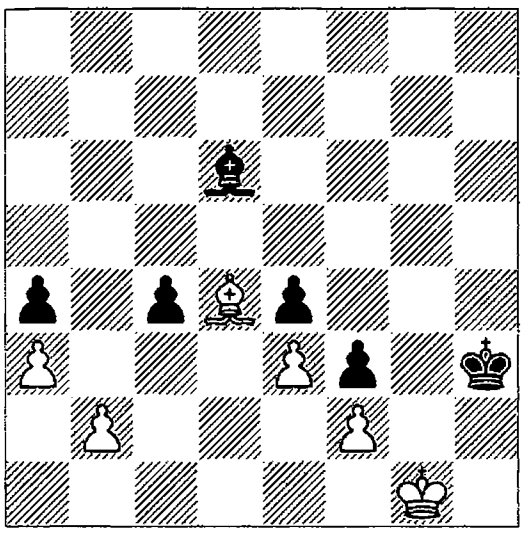
7 ♔c4 ♔e5

Black loses the race, but after 7...♔c6 8 g5 he loses in any case as White has the opposition and hence wins the a-pawn.

8 ♔b5 ♔f4 9 ♔xa5 ♔xg4 10 ♔b5 ♔h3 11 a5 g5 12 a6 g4 13 a7 g3 14 a8♕ 1-0

A bad bishop isn't always fatal. Even if the attacker's king penetrates into the enemy position, the win can only be secured if there is some way to attack the weak pawns. If the position is blocked, this may not be possible.

B



Pantebre Martinez – Paoli
Haifa Olympiad 1976

This position is often quoted as an example of a pawn sacrifice to create an entry for the king. It appears in *Informator 23* with notes by Minev, in the *Encyclopaedia of Chess Endings* (with the same notes), in *Van Perlo's Endgame Tactics* and in the 1981 edition of my own *Tactical Chess Endings* (in the 1988 edition I removed the position, having by that time realized that the example was incorrect). All these sources give the position as winning for Black, but actually it is a draw.

1...c3!

There is no doubt that this is the best chance, for otherwise White plays ♗c3 and Black's king has no route to enter White's position.

2 ♗xc3

2 bxc3? ♗xa3 3 c4 ♔g4 4 c5 ♔f5 5 ♔f1 ♗b4 is hopeless for White as the a-pawn is too strong.

2...♔g4

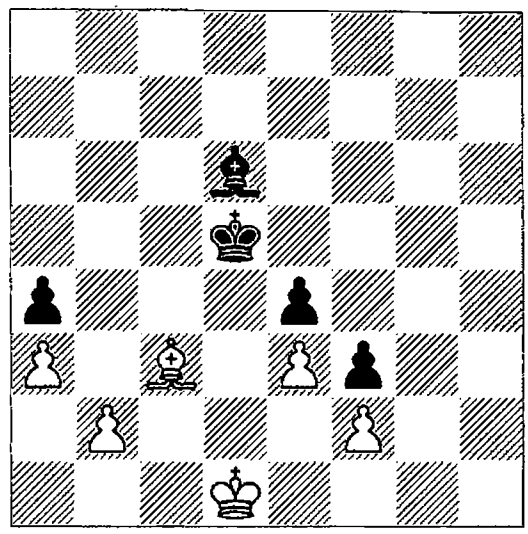
Now that the c4-square is vacated, Black's king has at least a possibility of penetrating into White's position. However, by itself this does not guarantee victory.

3 ♔f1 ♔f5 4 ♔e1 ♔e6 5 ♔d1

5 b4? axb3 6 a4 loses at once to 6...♗b4!.

5...♔d5 *(D)*

W



6 ♔e1

6 ♔c2 is also good enough if White meets 6...♔c4 with 7 ♔d2, but not 7 ♗e1? ♗e5 8 ♗c3 ♗g3! 9 ♗e1 ♗h4, which leaves White in zugzwang. Black wins neatly after 10 ♔c1 ♔d3 11 ♔d1 ♗g3! 12 fxg3 ♔xe3 13 g4 f2 14 ♗xf2+ ♔xf2 15 g5 e3, as the e-pawn promotes first.

6...♔c4 7 ♗d4

Even this passive defence should be sufficient to draw, but it would have been even simpler to continue 7 ♔d2 (White's king stays near enough to the f-file to prevent ...♗g3) 7...♗c7 (7...♔b3 8 ♗f6 ♗c7 9 ♗d4 ♗a5+ 10 ♗c3 ♗xc3+ 11 bxc3 ♔xa3 12 ♔c2 is also a draw) 8 ♗d4 ♗a5+ 9 ♗c3 ♗xc3+ 10 bxc3 ♔b3 11 c4 ♔xc4 12 ♔c2 and now the draw is clear.

7...♔d3 8 ♔f1

8 ♔d1 ♗g3 9 ♔e1 ♗h4 10 ♗g7 is also a draw.

8...♔d2 9 ♗c3+ ♔c2

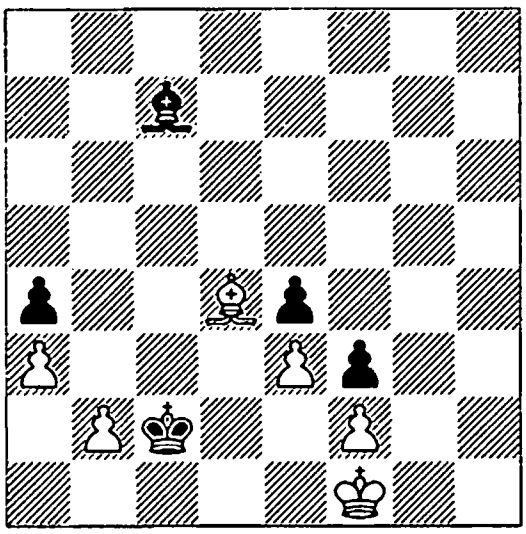
Now White must move his bishop as Black threatens 10...♗xa3.

10 ♗d4 ♗c7 *(D)*

By this stage all the above sources had abandoned White's position as hopeless and gave no further notes, but a draw is still possible.

11 ♔e1?

The losing move, which allows the black bishop to penetrate to d2 and then c1. White could still have held the game by 11 ♗c3! ♗b6 (11...♔d1 12 ♗b4 does not help Black) 12 ♔e1 and Black cannot make progress. When Black threatens to check on a5, White keeps his bishop on c3 and passes with his king. Black can only force the bishop away from c3 by targeting the



a3-pawn along the a3-f8 diagonal, but then White just moves his bishop along the long diagonal and Black cannot immediately play his bishop to the a5-e1 diagonal.

11...♗a5+ 12 ♔f1 ♗d2

Now White's queenside pawns fall.

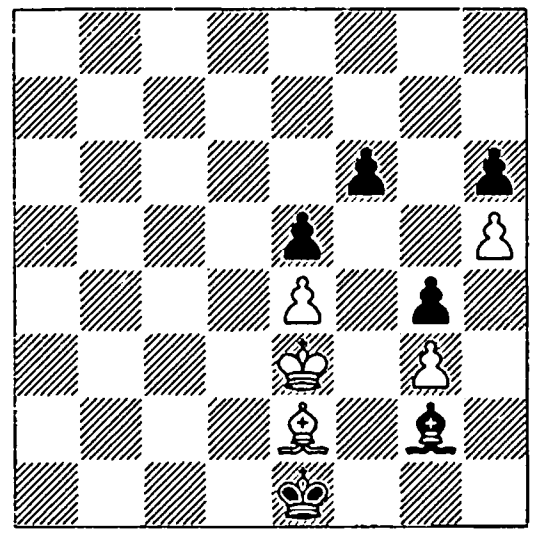
13 ♔g1 ♗c1 14 b4 axb3 15 a4 ♗d2 16 ♔h2 ♗c3 0-1

Summary:

- A *bad bishop* is one that is obstructed by its own pawns. If the pawns are blocked, the bishop's problems are likely to be permanent.
- A bad bishop is a handicap not only because of its limited mobility, but also because it is unable to attack the enemy pawns, while its own pawns are vulnerable to attack.
- Two pawns stuck on the same colour as your bishop can be fatal all by themselves. It follows that if you already have one such pawn, you should make every effort to avoid acquiring a second one.
- In order to exploit a bad bishop, it is often necessary to penetrate with the king, and zugzwang is the weapon most frequently used to achieve this. If no such penetration is possible, then the defender may be able to save the game despite his inferior bishop.

4.4.2 Stalemate

Stalemate ideas occur surprisingly often in bishop endings. The following position is unusual because the king that is stalemated stands in the middle of the board and not on the edge.



V.I. Fedorov – Arkhipov
USSR 1980

This position has caused considerable confusion. In the game White lost, but in *Informator 30* Polovodin and Fedorov claimed that White missed a draw. In reality, the line they gave is winning for Black, but a different defence does indeed secure a draw. I hope that's clear.

The position looks fairly miserable for White since he is a pawn down and Black's king has already made inroads into White's position. But there is still one obstacle to overcome: the black king must cross the f1-square in order to get among the white pawns. The crucial question is whether Black can use his bishop to lift White's control of f1.

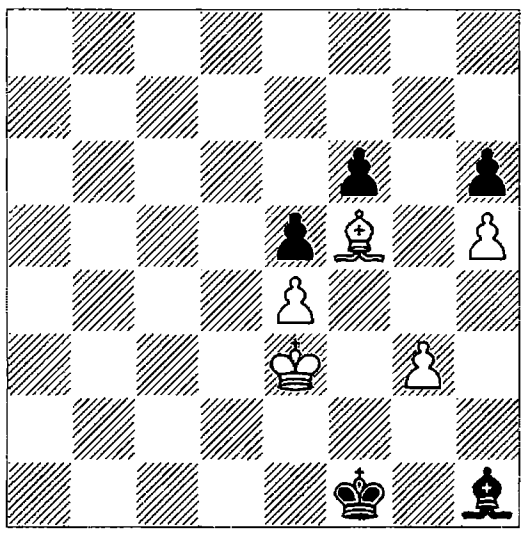
1 ♗xg4?

White restores material equality, but allowing the king to penetrate is a massive concession that soon proves fatal. The supposed drawing line in *Informator* runs 1 ♗b5 (of course, 1 ♗d3, 1 ♗c4 and 1 ♗a6 are equally good) 1...♗f1 (trying to bring the bishop round to attack the h5-pawn also fails due to a stalemate defence; for example, 1...♗f3 2 ♗c4 ♗d1 3 ♗d3 ♗b3 4 ♗c4 and White keeps opposing bishops) and now 2 ♗c4?, but this fails to 2...f5!, when Black wins after 3 ♗xf1 f4+ 4 gxf4 ♔xf1 or 3 exf5 ♗xc4 4 f6 ♗d5. However, the idea of playing the bishop along the f1-a6 diagonal is correct, but it needs to be followed up properly. The key point is to play 2 ♗e2!; the basic stalemate idea remains the same, but the big difference is that now 2...f5 can be met by 3 ♗xg4 with a further stalemate after 3...fxg4.

1...♔f1 2 ♗f5

Trying to defend the e4-pawn by 2 ♗d1 ♔g1 3 ♗c2 in order to meet ...♔h2 by ♔f2 doesn't work because Black plays 3...♗h1! (threatening ...♔g2) 4 ♗d1 (the only defence) 4...♔h2 and White loses a pawn in any case.

2...♗h1! *(D)*



Clearing the way for Black's king to move to g2.

3 g4

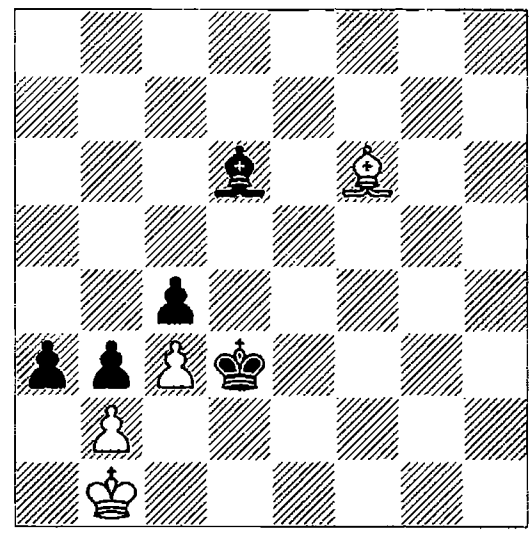
White decides to try a counterattack against Black's pawns by playing his king round to e6, but this proves too slow. However, passive defence also fails: 3 ♗h3+ ♔g1 4 ♗g4 (to prevent ...♔g2) 4...♔h2 5 ♔f2 ♗xe4 6 ♗e6 ♗g2 7 g4 e4 8 ♗d7 e3+ 9 ♔xe3 ♔g3 followed by ...♗f3 leads ultimately to the capture of both white pawns.

3...♔g2 4 ♔d3 ♔g3 5 ♔c4 ♗f3 6 ♔d5 ♗xg4 7 ♔e6 ♗xh5 8 ♔xf6 ♔f4

Black is in time to save the e-pawn, after which the win poses no problems thanks to the passed h-pawn.

9 ♔e6 ♗f3 10 ♔d5 h5 11 ♗g6 h4 12 ♗f5 ♗g2 0-1

The bishop ending in the following diagram looks grim indeed for White. Not only is he a pawn down, but his pawns are stuck on the same colour squares as his bishop and Black's pieces are very active. Nevertheless, by means of a cunning defence White could have secured a draw, as was pointed out by Candea and Stoica in their *Informator 37* notes.



Castilo – Calinescu
Champigny sur Marne 1984

1 ♗g7

White correctly keeps his bishop on the long diagonal for the moment. 1 bxa3? ♗xa3 leads to a winning position for Black as in the game.

1...axb2

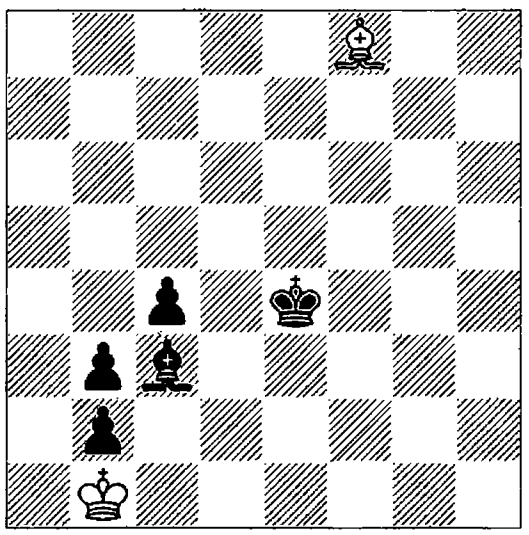
Other moves do not help. After 1...a2+ 2 ♔a1 the stalemate possibilities save White; for example, 2...♗a3 (this threatens 3...♔c2; if 2...♔c2 is played at once, 3 ♗f8! ♗f4 4 ♗h6! perpetually attacks Black's bishop) 3 ♗f8! saves White as 3...♗xb2+ 4 ♔xb2 a1♕+ 5 ♔xa1 ♔c2 can be met by 6 ♗a3.

An interesting situation arises after 1...♔e4 2 ♗f6 ♗e5. The notes by Candea and Stoica indicate a draw by 3 ♗xe5? ♔xe5 4 bxa3 but, except for a slight difference in the position of the black king, this is an endgame study by Horwitz (*The Chess Monthly*, 1879). Horwitz's solution demonstrates an instructive winning technique: 4...♔e4 5 ♔c1 ♔e3! (Black first manoeuvres so as to force White to push his a-pawn) 6 ♔b1 ♔d2 7 ♔b2 (or 7 a4 ♔xc3 8 a5 b2 9 a6 ♔b3 10 a7 c3 11 a8♕ c2#) 7...♔d3 8 a4 ♔e4 (now that White has weakened his a-pawn, Black plays his king round to a5) 9 ♔b1 ♔d5 10 ♔b2 ♔c6 11 ♔b1 ♔b6 12 ♔b2 ♔a6 (this triangulation wins the a-pawn) 13 ♔a3 ♔a5 14 ♔b2 ♔xa4 15 ♔b1 ♔b5 and now that the a-pawn has gone, Black plays his king back to d3 and wins the c-pawn as well. However, this doesn't mean that Black can win by 1...♔e4 2 ♗f6 ♗e5. The correct defence is not to exchange bishops, but

to play 3 ♗e7! axb2 (3...a2+ 4 ♔a1 ♔d3 5 ♗f6 is also a draw) 4 ♗b4, which leads to a draw as in the note to White's second move.

2 ♔xb2?

The losing move. White unwisely captures the enemy pawn which, paradoxically, is precisely the piece he needs to leave on the board in order to reach a draw. The correct defence is simply to wait. Although Black can also win the c3-pawn, he cannot win the game despite his three-pawn advantage; for example, 2 ♗f6 ♔e4 (Black can win the c3-pawn by transferring the bishop to the long diagonal; playing to win the c-pawn immediately fails because after 2...♗f4 3 ♗g7 ♗d2 4 ♗f6, taking the pawn would lead to stalemate) 3 ♗g7 ♗e5 4 ♗f8 ♗xc3 *(D)*.



The capture of White's last pawn may appear to finish the game, but it soon becomes clear that it is hard for Black to make progress. The only way forward is to play ...c3, but if White can keep his bishop covering this square then he can simply take the pawn whenever it advances to c3, and however Black recaptures it is stalemate. Provided White takes care, he can always keep his bishop trained on c3 and he cannot fall into zugzwang because the two diagonals passing through c3 are long enough.

The analysis runs 5 ♗e7! (5 ♗g7? is wrong due to 5...♗d4 6 ♗f6 c3 7 ♗xd4 c2+ 8 ♔xb2 ♔xd4, winning; 5 ♗h6! is the only other move to draw) 5...♔d3 6 ♗d6 ♗d4 7 ♗b4! ♗e3 (7...c3 8 ♗xc3) 8 ♗a5 ♗d2 and although it looks as if Black has managed to drive White's bishop away from controlling c3, the reply 9 ♗c3! shows that Black cannot make progress and the position is drawn.

2...♗a3+ 3 ♔b1

3 ♔xa3 ♔c2! and the pawn promotes.

3...♔e4

Without the b2-pawn there is no stalemate and White is lost because the c3-pawn is too weak. The first step in Black's winning plan is to transfer his bishop to the long diagonal.

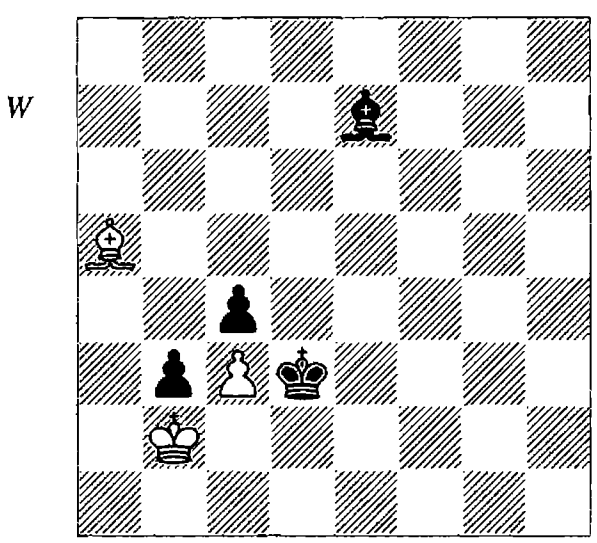
4 ♗f6 ♗d6 5 ♔b2 ♗e5 6 ♗e7

6 ♗h4 ♔d3 7 ♗e1 ♗f6 is an immediate zugzwang.

6...♔d3 7 ♗b4 ♗f6

This zugzwang forces White's bishop to a5, after which Black's bishop can switch back to the a3-f8 diagonal.

8 ♗a5 ♗e7 *(D)*



A second zugzwang; White's bishop must now abandon its defence of c3.

9 ♗c7

9 ♔b1 ♗a3 is another zugzwang, forcing White to surrender his pawn since 10 ♔a1 loses to 10...♔c2.

9...♗a3+!

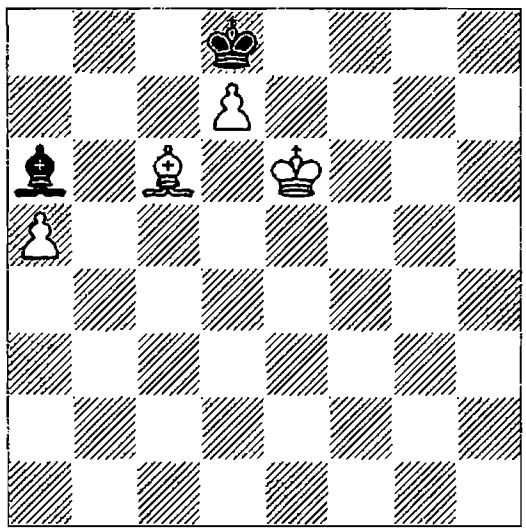
The culmination of Black's winning manoeuvre, which involves a switchback to the a3-square.

10 ♔b1

10 ♔xa3 loses to 10...♔c2.

10...♔xc3 11 ♗e5+ ♔d3 12 ♗f6 c3 0-1

It may be that in order to win, it is necessary to prevent a stalemate defence.



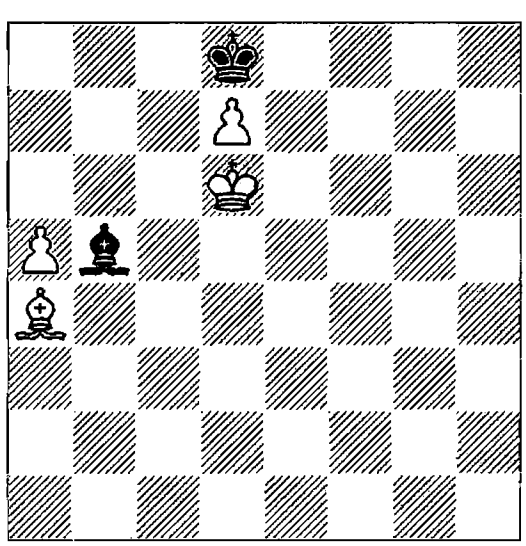
Mollov – Kerchev
Sofia 1988

This looks like an easy win; White is two pawns up, both his pawns are advanced and he has the correct bishop for the rook's pawn. The winning plan is evidently to play the king to b6 to drive away Black's bishop, after which the a-pawn can advance. White can win quite easily with the right plan, but he committed an inaccuracy after which the win became significantly more difficult.

1 ♗a4?!

1 ♔d6! was the simplest move; after 1...♗e2 (1...♗b5 2 ♔c5 is even worse) 2 ♗d5! ♗b5 (2...♗f1 3 ♔c6 ♗e2 4 ♗e6 followed by ♔b6 is a simple win, so Black prevents ♔c6) 3 ♗b7 Black doesn't have a good move since if the bishop stays on the a6-f1 diagonal, White plays ♔c6, while 3...♗xd7 4 a6 ♗c8 5 ♔c6 ♗d7+ 6 ♔b6 is decisive.

1...♗c4+ 2 ♔d6 ♗b5! *(D)*



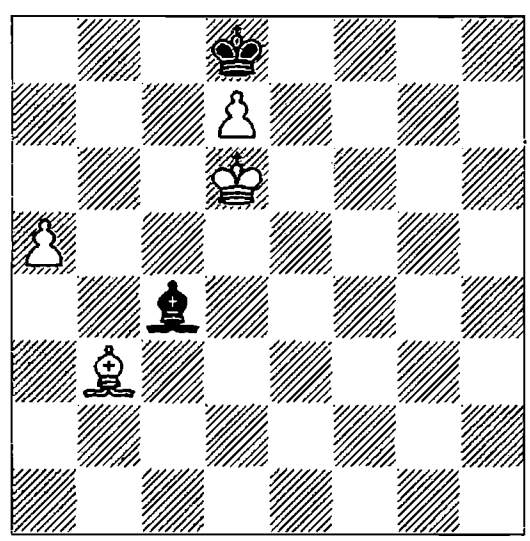
Thanks to this stalemate trick, Black can cause White considerable difficulty. Indeed, at first sight the position is just drawn, since Black can always oppose bishops.

3 ♗b3!

This is the correct square for the bishop, because Black has to oppose on c4, but then the white king's control of d5 makes it hard for the enemy bishop to cover the a8 queening square.

3...♗c4! *(D)*

3...♗xd7 loses after 4 a6 ♗c8 (4...♔c8 5 ♗d5 is also winning for White) 5 a7 ♗b7 6 ♗d5 ♔c8 7 ♗c6 and Black is in zugzwang.



4 ♗a2!!

This collinear move is the key idea. Black must stay on the a6-f1 diagonal, but then he has to stop opposing White's bishop, which can emerge to play a more active role.

4...♗b5

After 4...♗xa2 5 a6 ♗b1 6 ♔e5! the a-pawn promotes. In this particular position the bishop cannot reach the a8-h1 diagonal, which explains why the sacrifice had to take place on a2.

5 ♗d5

Now that White has rescued his bishop, he can win much as in the note to his first move.

5...♗c4

5...♗xd7 6 a6 and 5...♗e2 6 ♔c6 ♗f1 7 ♗e6 are also easy wins for White.

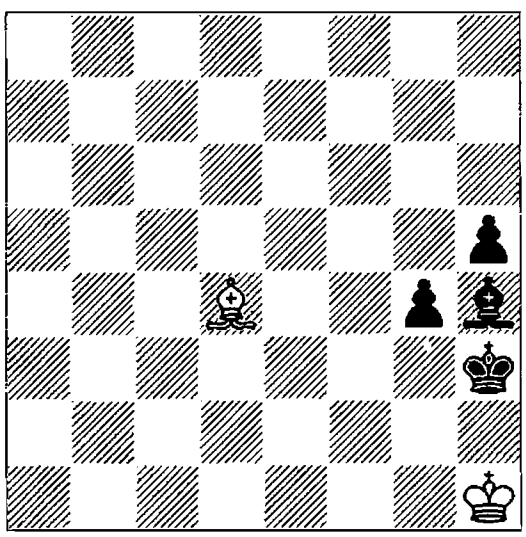
6 ♗b7 ♗e2

Or 6...♗b5 7 ♔c5! ♗xd7 8 ♔b6 followed by a6.

7 ♔c6 1-0

The coming a6 will be decisive.

The perpetual attack + stalemate theme is one of the main sources of stalemate ideas in bishop endings, but it doesn't always work.



Brown – Distler
London 1949

This is an example of how dangerous it is to think in terms of 'narratives' rather than actual variations.

This position is a draw according to the *Encyclopaedia of Chess Endings*, and *Van Perlo's Endgame Tactics* reproduces *ECE*'s opinion without any further comment.

1 ♗f2

Playing for stalemate is the best practical try, and it unexpectedly succeeds.

1...♗g3 2 ♗e3

The idea is that if Black now moves his bishop along the a7-g1 diagonal, White just opposes bishops and it's either perpetual attack or stalemate. When expressed like this, the 'narrative' is deceptively plausible, and doubtless contributed to Van Perlo and the editors of the *Encyclopaedia of Chess Endings* accepting that the position is a draw. The trouble is that it isn't a draw at all. If White keeps opposing bishops, Black just plays his bishop to f4 and meets ♗e3 with ...♔g3, followed by ...♔f3, when there is no stalemate and Black wins with his two extra pawns.

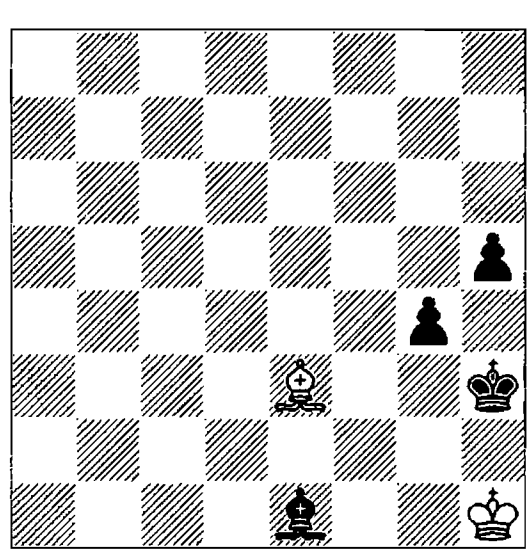
2...♗e1?

Throwing away the win. Another bad move is 2...h4?, when White draws by 3 ♗a7 (White should not show off with 3 ♗f2? as Black has a surprising win by 3...♗h2!, with a position of reciprocal zugzwang; after 4 ♗xh4 ♗g3! 5 ♗g5 ♗e5 followed by ...g3-g2, Black has an easy win) 3...♗h2 (or 3...♗c7 4 ♗b6 and White continually attacks Black's bishop) 4 ♗f2! (now Black must move his bishop again, since 4...g3 5 ♗xg3 is an instant draw) 4...♗f4 5 ♗e3 ♔g3 6 ♗f2+! (this shows why it is bad to advance the pawn to h4; the king must return to h3, since otherwise White simply takes the h-pawn) 6...♔h3 7 ♗e3! and Black cannot make progress.

2...♗h2! is the simplest win, threatening 3...g3; after 3 ♗f2 ♗f4 4 ♗e3 ♔g3 5 ♗f2+ ♔f3 (Black can play this move when the pawn stands on h5; it relieves the stalemate and allows a simple technical win based on the two extra pawns) 6 ♔g1 ♗e3 7 ♔f1 g3 White can resign.

Thus the faulty narrative can be replaced by a new one: the perpetual attack + stalemate idea doesn't lead to a draw when the pawn is on h5, but does if Black mistakenly pushes the pawn to h4. This narrative is much more valuable than the previous one, if only because it happens to be true.

We now return to the position arising after 2...♗e1? *(D)*:



3 ♗f2!

Now the perpetual attack idea really does force a draw.

3...♗d2 4 ♗e3 ♔g3

A last try.

5 ♗xd2 ♔f2 6 ♗g5 ½-½

White can meet 6...g3 by 7 ♗h4.

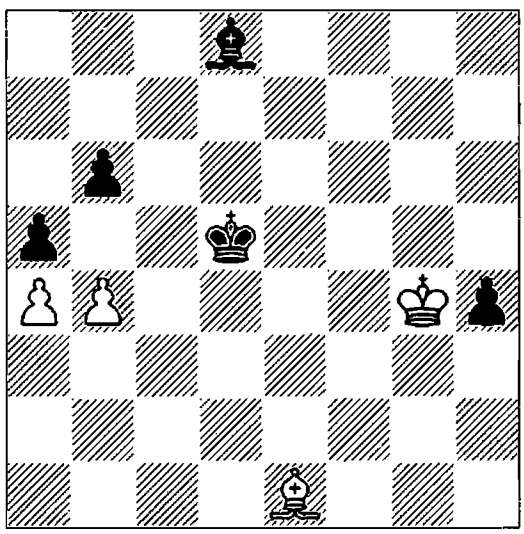
Summary:

- Stalemate ideas occur relatively often in bishop endings. In most cases the defender's king is in the corner or on the edge of the board, but mid-board stalemates are also possible.
- One common idea is that of a perpetual attack on the enemy bishop. In this case the two bishops move along parallel diagonals, with the defender always opposing the enemy bishop. While this idea draws in some cases, there are situations in which the attacker can disrupt the perpetual attack and win.

4.4.3 Breakthrough

The creation of passed pawns is a theme in all types of ending, and while this can sometimes be achieved by the steady advance of a pawn-majority, in other cases more dramatic means are possible. Some of the breakthrough ideas we saw in Section 2.3 (page 56) in the context of pawn endings apply just as well in bishop endings, as in the following position where Black made good use of the 'square breakthrough'.

B



Filip – Mozny
Czechoslovakia 1977

It looks as though White can reach a draw by eliminating all Black's queenside pawns, leaving him with an h-pawn plus wrong bishop combination. However, Black dashed White's hopes by making a queenside breakthrough.

1...b5!

Black strikes with the square breakthrough and secures a passed a-pawn. 1...axb4? 2 ♗xb4 ♔c4 3 ♗e1 is an immediate draw.

2 bxa5

2 axb5 a4 3 ♗c3 a3, followed by ...a2 and ...♗b6-d4, is also a win for Black.

2...bxa4 3 a6

White's passed pawn is easily rounded up.

3...♔c6 4 ♗b4

Preventing the advance of the a-pawn for as long as possible.

4...♗b6

4...♔b6? 5 ♗a5+! lets White escape.

5 ♔xh4 ♔b5 6 ♗a3 ♔xa6 7 ♔g3 ♔b5 8 ♔f3

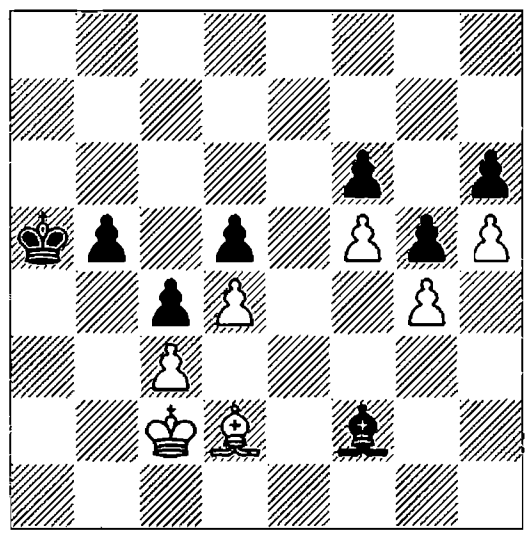
The king races back, but too late.

8...♗c5 9 ♗c1 ♔c4 10 ♔e2 ♔b3 0-1

11 ♔d3 prevents ...♗d4-b2, but the bishop has other ways to reach b2, such as 11...♗e7 followed by ...♗f6 and ...♗b2.

The following example is more complex and involves a bishop sacrifice.

W



Mikhailenko – Savenko
Krasnodar 1995

Things look bleak for White: he is a pawn down, Black's king is active and White's bishop appears blocked in by pawns. However, White has a surprising resource that should lead to a draw. This position was analysed in *Informator 65* (by Nadyrkhanov) and in *Van Perlo's Endgame Tactics*.

1 ♗f4!

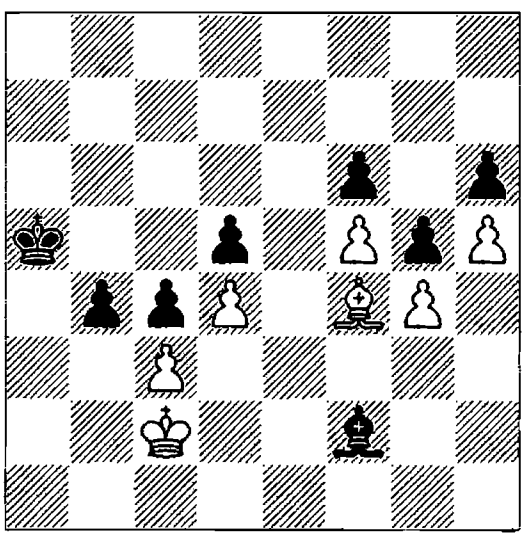
1 ♗xg5? loses after 1...fxg5 2 f6 ♗g3 followed by ...♗d6 and Black stops the pawn. Nor can White afford to wait; for example, 1 ♔b2? ♗g3 (preventing any tricks) 2 ♔c2 ♔a4 3 ♔b2 ♗h4 (now White is in zugzwang) 4 ♔a2 ♗f2 followed by ...b4 and White's position collapses.

1...♗xd4?

Perhaps shocked by White's move, Black even throws away the draw. Nadyrkhanov's notes indicate that White wins in all lines, but this is not correct, as we shall see. Black has two better continuations. The first is 1...gxf4 2 g5 (winning for White according to Nadyrkhanov) 2...f3 (Van Perlo correctly points out that this saves the game for Black, although he doesn't analyse the most critical continuation) 3 g6 (3 gxh6 ♗e3 4 h7 f2 is a 'probable' draw according to Van Perlo, but the qualifier seems unnecessary; for example, 5 h8♕ f1♕ 6 ♕d8+ ♔a6 7 ♕xf6+ ♔b7 8 ♕e7+ ♔b6 and White should give perpetual check, since 9 ♕xe3?! costs him both kingside pawns) 3...♗e3 4 ♔d1 f2 5 ♔e2 b4 6 g7 bxc3 (6...f1♕+ 7 ♔xf1 bxc3 8 g8♕ c2 9 ♕d8+ ♔a6! also leads to a draw) 7 g8♕ c2 8 ♕xd5+ ♔b4 9 ♕c5+ ♔b3 10 ♕b5+ ♔c3 and White cannot make progress.

Black's best try is 1...b4!? *(D)*, which is not mentioned by Van Perlo and is misanalysed by Nadyrkhanov.

W



The options are:

1) 2 cxb4+? is given as winning for White by Nadyrkhanov, but this move loses. Here are the possibilities:

1a) Nadyrkhanov only analyses 2...♔xb4? and gives the line 3 ♗d6+ ♔b5 4 ♗f8 ♗xd4 5 ♗xh6 ♗e3 6 ♗f8 d4 7 h6 d3+ 8 ♔c3 ♗d4+ 9 ♔d2 and wins, but practically everything in this line is wrong. First of all, Black can draw by 5...♗e5! 6 ♗f8 d4 7 h6 d3+ 8 ♔d2 ♗f4+ 9 ♔c3 ♗e5+, with a repetition. Secondly, after the faulty 5...♗e3?, White can win by 6 ♗g7! d4 7 ♗xf6 ♔b4 8 ♗e7+ ♔a4 9 f6 d3+ 10 ♔c3 ♗d4+ 11 ♔d2 ♔b3 12 f7 ♗g7 13 f8♕ ♗xf8 14 ♗xf8 c3+ 15 ♔xd3 c2 16 ♗a3. Lastly, the final position of Nadyrkhanov's line, far from being a win, is actually a draw after 9...♗e5 10 h7 ♗f4+ 11 ♔e1 c3 12 ♗b4 (not 12 h8♕? c2 and White is in trouble) 12...♔xb4 13 h8♕ c2 14 ♕f8+ and White must give perpetual check.

1b) 2...♔a4! (gaining a vital tempo by not allowing ♗d6 with check) 3 ♗e5 (the only chance, as 3 ♗d6 ♗xd4 4 b5 ♔xb5 5 ♗f8 ♗c5 6 ♗xh6 d4 7 ♗g7 d3+ 8 ♔d2 ♗b4+ 9 ♔e3 d2 10 ♔e2 c3 11 ♔d1 ♔c4 12 ♗xf6 ♔d3 13 ♗xc3 ♗xc3 wins for Black) 3...fxe5 4 f6 ♗e1! 5 dxe5 ♔b5 (perhaps surprisingly, Black's king makes it back in time to stop the pawns) 6 e6 ♔c6 7 b5+ ♔d6 8 e7 ♔d7 9 b6 d4 10 b7 ♗g3 and although Black can't actually take the white pawns, he wins since he can usher his own pawns home using only his bishop.

2) 2 ♗d6! bxc3 3 ♔xc3 (not 3 ♗f8? ♗xd4 4 ♗xh6 ♗e5 and the black pawns are too strong) 3...♗e1+ 4 ♔c2 ♗f2 (4...♗b4 5 ♗c7+ ♔b5 6 ♗d8 ♔c6 7 ♗xf6 ♔d7 also leads to a draw) 5 ♔c3 leads to a draw.

2 ♗xg5!

Nadyrkhanov considers that 2 cxd4? leads to a draw, but actually Black wins after 2...gxf4 3 g5 f3 4 ♔d2 f2 (4...fxg5 also wins) 5 ♔e2 and now the simplest is 5...c3 6 gxf6 c2 7 f7 f1♕+ and Black promotes with check.

2...♗xc3

2...fxg5 3 cxd4 is also hopeless for Black.

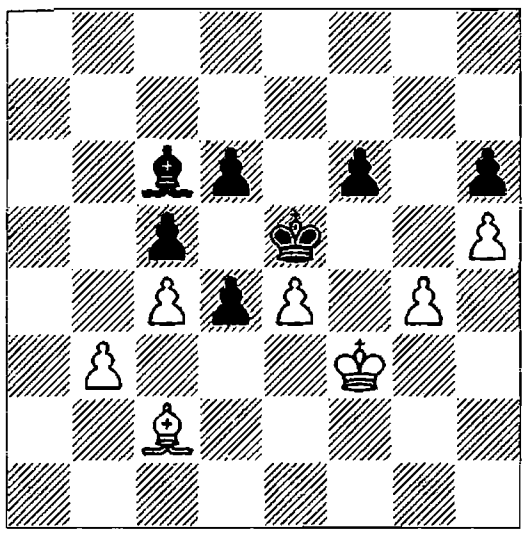
3 ♔xc3 b4+ 4 ♔d2 1-0

Summary:

- Some of the breakthrough ideas from pawn endings are also applicable to bishop endings, especially the square breakthrough.
- It's sometimes possible to sacrifice the bishop to create an unstoppable passed pawn.

4.4.4 Clearing a Path for the King

Penetrating with the king is an important objective in many bishop endings. Once the king has got amongst the enemy pawns, they often drop like ripe plums. If there is currently no entrance for the king, it is sometimes possible to create one by sacrificing a pawn. This motif seems to occur especially often in bad-bishop situations, and indeed we have already seen one example on page 209 (Pantebre Martinez-Paoli). Here are two further examples.



Bjelajac – S.N. Nikolić
Yugoslavia 1985

Material is equal, but there is no doubt who is in the driving seat. Every white pawn is stuck on a light square, while every black pawn is on a dark square, leaving White with a seriously bad bishop. However, for all that, it isn't easy for Black to win since for the moment White has everything defended. Somehow Black has to find a way in, even if this means giving up a major asset, his protected passed pawn. According to Nikolić's notes in *Informator 39*, the diagram position should be a win for Black. I disagree, and believe that with accurate play it is a draw.

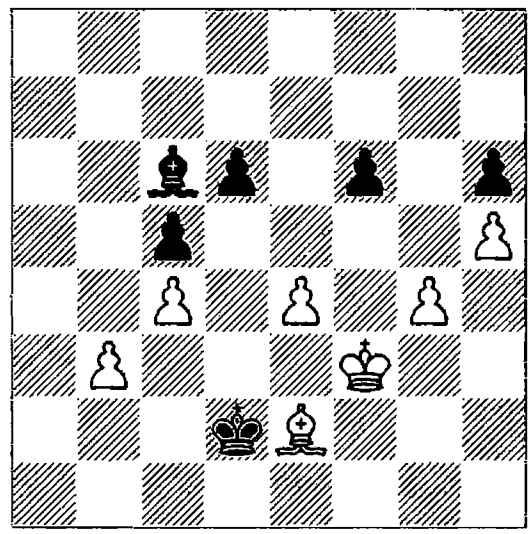
1...d3!?

The only real chance to win, since otherwise Black can't make any progress at all. Although this move should not be enough to win, it creates considerable practical problems for White. Black's king penetrates into White's position, harassing White's bishop and targeting the weak b3-pawn. The only complicating factor (and it is a considerable one) is that Black's position is also not totally secure, since once Black's king has moved to the queenside, White has the possibility of penetrating with his own king via f5.

2 ♗xd3 ♔d4 3 ♗c2

White correctly retreats his bishop along the b1-d3 diagonal so as to keep his e-pawn. After 3 ♗e2? Black wins with 3...♗xe4+ 4 ♔f4 ♗c2 5 ♗f3 ♗xb3 6 ♔f5 ♗xc4 7 ♔xf6 ♗d3! 8 ♔g7 c4 9 ♔xh6 c3 10 ♗d1 ♗e2 followed by ...♗xg4.

3...♔c3 4 ♗d1 ♔d2 5 ♗e2 *(D)*



The key point about this ending is that Black does not win even if he takes the b3-pawn, so White does not need to take desperate measures to try to save this pawn.

5...♗d7

Thus after 5...♔c2 6 ♔f4 ♗d7, Nikolić's notes only gave 7 e5?, which he considered sufficient to draw, although it actually loses after 7...dxe5+! 8 ♔e4, and now:

1) 8...♔xb3 wins, but in a rather complicated way: 9 ♔d5 ♔b4 10 ♔d6 (or 10 ♗d1 e4 11 ♗e2 e3 12 ♔e4 ♗e6 13 ♔xe3 ♗xc4 14 ♗f3 ♔c3 15 ♔e4 ♗e6 and the c-pawn will be decisive) 10...♗xg4! 11 ♗xg4 ♔xc4 12 ♔e7 ♔d3 13 ♔xf6 e4 14 ♔g6 c4 15 ♔xh6 c3 16 ♗d1 ♔d2 17 ♔g6 ♔xd1 18 h6 c2 19 h7 c1♕ 20 h8♕ ♕c6+ with a winning ending of ♕+♙ vs ♕.

2) 8...♔d2! (Nikolić didn't consider this move, which wins more simply) 9 ♗f1 ♗xg4 10 ♔d5 ♗xh5 11 ♔xc5 e4 12 b4 (12 ♔d4 e3 13 c5 ♗f3 14 b4 h5 15 b5 e2 16 ♗xe2 ♔xe2 is an easy win for Black) 12...e3 13 b5 ♗f3 14 ♔d6

h5 15 c5 h4 16 c6 h3 17 ♗xh3 e2 and Black wins.

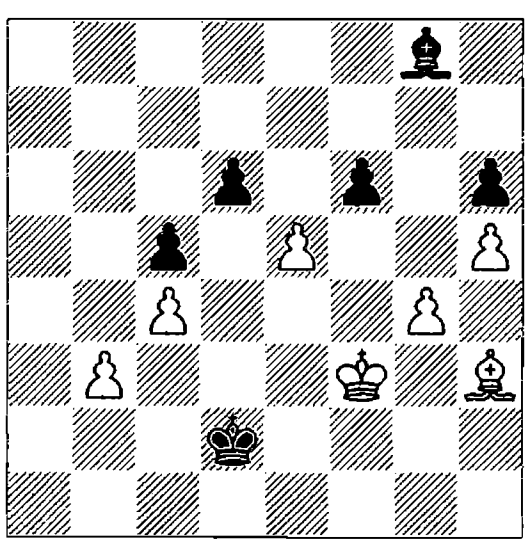
White's mistake in this note was the panicky 7 e5?. Instead, he should play 7 ♗f1 ♔xb3 8 ♗d3 ♗e6 9 ♗f1, when Black cannot make progress, as we shall see in the note to White's 8th move.

6 ♗f1 ♗e6 7 ♗h3

Threatening g5, so Black's bishop must retreat.

7...♗g8 8 e5? *(D)*

This sacrifice should lose, although Black has to find some good moves to refute it. However, it wasn't necessary for White to resort to such drastic measures when he could have held the game by passive defence: 8 ♔f4 ♗h7 9 ♗f1 ♔c3 10 ♔e3 ♔xb3 11 ♗d3 ♗g8 12 ♔f4 ♔c3 13 ♗e2 was the way to proceed. Then Black's only attempt to make progress is by 13...♔d2 (13...♗xc4 14 ♗xc4 ♔xc4 15 ♔f5 ♔d3 16 ♔xf6 c4 17 g5 c3 18 g6 c2 19 g7 c1♕ 20 g8♕ is a draw, while 13...♗e6 14 ♗f1 ♔d4 15 ♗e2 ♗c8 16 ♗f1 is safe as ...♗b7 can always be met by ♔f5) 14 ♗f1 ♔e1 15 ♗d3 ♗e6 16 ♔f3 and White's defences hold.



8...fxe5?

Now it's a draw again. Black could have won with a spectacular piece of tactics, as pointed out by Nikolić: 8...dxe5! 9 g5 (Black wins after 9 ♔e4 ♗h7+ followed by ...e4) 9...fxg5! (after 9...hxg5? 10 ♔e4 ♔c3 11 h6 ♔xb3 12 ♗e6 White forces a draw by repetition) 10 ♔e4 ♔c3 11 ♔xe5 ♔xb3 12 ♔f6 ♗xc4 13 ♗g4 (13 ♔g6 ♗e2 14 ♔xh6 g4 15 ♗g2 g3 16 ♔g5 ♗xh5 17 ♔xh5 c4 18 ♔g4 c3 19 ♗e4 g2 also wins for Black) 13...♗e2!! (this amazing move suggested by A.Kapetanović is the only one to win; after 13...♗d3? 14 ♔g7 c4 15 ♔xh6 c3 16 ♗d1+ it's just a draw) 14 ♗xe2 c4 15 ♔g6 c3 16 ♗d1+ ♔b2 (16...c2? 17 ♗xc2+ ♔xc2 18 ♔xh6 g4 19 ♔g7 g3 20 h6 is a draw) 17 ♔xh6 g4 18 ♗xg4 (after 18 ♔g7 g3 Black wins easily) 18...c2 19 ♔g6 c1♕ 20 h6 ♕c6+ 21 ♔g7 ♕c7+ 22 ♔g6 ♕d6+ 23 ♔g7 ♕d4+ 24 ♔f7 ♕f4+ and next move Black can take the bishop.

9 g5

White creates a passed h-pawn which solves all his problems.

9...d5

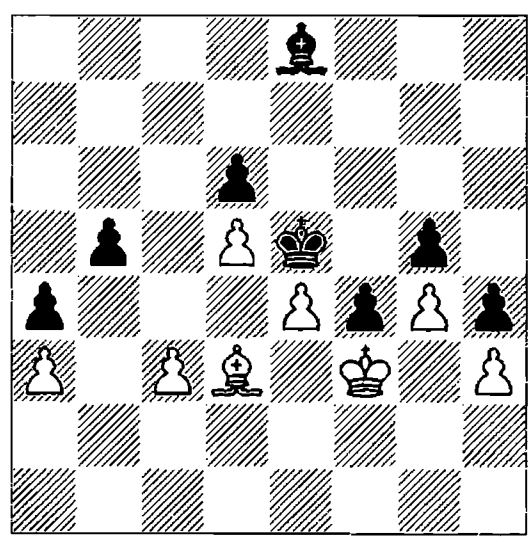
9...hxg5 10 ♗f5 is also a safe draw; for example, 10...♔c3 11 h6 ♔xb3 12 ♔e4 ♔c3 13 ♗e6 ♗h7+ 14 ♗f5 and Black must repeat moves.

10 cxd5 ♗xd5+ 11 ♔g3 ♗xb3 12 gxh6

Now the draw is clear.

12...♗c2 13 ♗e6 ♗h7 14 ♗c4 e4 15 ♔f4 e3 16 ♔e5 ♗g8 17 ♔d6 ♗xc4 18 h7 e2 19 h8♕ e1♕ 20 ♔xc5 ♗d3 ½-½

Penetrating with your king carries the risk that the king is then poorly placed to cope with any passed pawns that the enemy can create. Therefore sacrifices to open a path for the king have to be finely judged and it's easy for things to go wrong.



Vrhovsek – D. Šahović
Yugoslavia 1970

This position is winning for Black, according to R.Marić in *Informator 10*. Indeed, a first

glance reveals that Black does have several advantages: he has a protected passed pawn, his king occupies an active central post and four of White's pawns are fixed on light squares. But there are some factors that operate in White's favour: Black's queenside pawns are fixed on light squares, and in order to make progress Black has to sacrifice a pawn. These factors permit White to hold the position.

1...b4!

Black risks little by playing this move, since the position remains a draw. In any case, Black has to try it if he wants to play for a win since otherwise his king cannot penetrate and his bishop is tied to the defence of b5.

2 cxb4

Not 2 axb4? a3 3 ♗b1 ♗g6 followed by ...♗xe4+ and Black wins.

2...♔d4 3 ♔e2!

The most logical choice, maintaining White's bishop on a square where it supports the advance of the b-pawn. After 3 ♗b1? (3 ♗f1? loses to 3...♗g6) Marić gives 3...♔c3? but this is a mistake due to 4 e5! ♔d4 (4...dxe5? 5 d6 ♔b2 6 ♗d3 followed by b5 even wins for White) 5 exd6 ♔xd5 6 ♗g6 ♗b5 7 ♗d3 and White draws by a perpetual attack on Black's bishop. Instead, Black should play 3...♗b5! 4 ♔f2 ♔c3 5 e5 ♔b2 6 ♗f5 ♔xa3 7 exd6 ♔xb4, winning.

3...f3+ 4 ♔d2 ♗d7!

Forced, or else White would even gain the advantage by pushing his b-pawn.

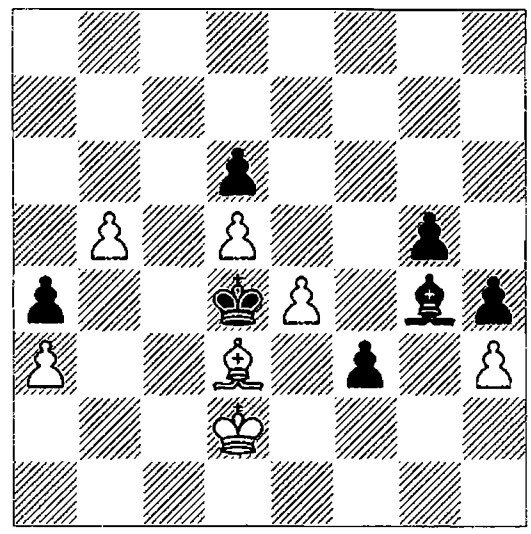
5 b5 ♗xg4? *(D)*

In his desire to win, Black oversteps the mark and should now have lost. The correct line was 5...♗c8 6 b6 ♗b7 and it's a draw since White's only winning attempt 7 e5 leads to nothing after 7...♔xe5 8 ♔e3 f2 9 ♗c4 ♗xd5 10 ♔xf2 ♗b7 11 ♔e3 d5.

6 hxg4??

White misses his chance. Marić did not comment on this move, which amounts to resignation. Instead, White could have secured a decisive advantage by 6 e5! ♔xe5 (Black loses at once after 6...♗xh3?! 7 b6 ♗c8 8 e6 or 6...dxe5?! 7 b6 ♗c8 8 d6) 7 hxg4 h3 8 b6 h2 9 b7 h1♕ 10 b8♕ and White's extra piece is enough to decide the game; for example, 10...♕h2+ (10...f2 11 ♕e8+ ♔f4 12 ♕e3+ ♔xg4 13 ♗e2+ ♔f5 14 ♕e6+ ♔f4 15 ♕g4+ ♔e5 16 ♕xg5+ is also a win for White) 11 ♔c3 ♕f4 12 ♕e8+ ♔xd5 13 ♕b5+ ♔e6 14 ♕f5+ ♕xf5 15 gxf5+ ♔d5 16 ♔d2 g4 17 ♔e3 ♔e5 18 ♗c2 ♔f6 19 ♔f2 d5 20 ♔g3 and White wins. It is surprising that White missed 6 e5! because everything else is clearly lost so there is no real alternative.

W



6...h3 7 b6 h2 8 b7 h1♕ 9 b8♕ ♕g2+

Now White must surrender his bishop, after which Black's advanced f-pawn is decisive.

10 ♔d1 ♔xd3 11 ♕b1+ ♔e3

11...♔d4! would have been much quicker, but the move played is also sufficient.

12 ♕b6+ ♔xe4 13 ♕b4+ ♔e5 14 ♕c3+ ♔f4 15 ♕b4+ ♔g3! 16 ♕xd6+ ♔f2 17 ♕c5+ ♔f1 18 d6 f2 19 ♕d4

19 d7 ♕xg4+ is also winning for Black.

19...♕f3+ 20 ♔c2 ♔g2 21 d7 f1♕ 22 ♕d2+ ♔h1 23 d8♕ ♕b3# (0-1)

Summary:

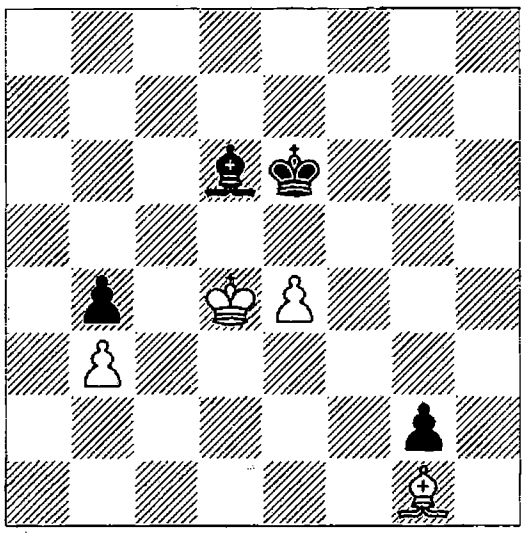
- Penetrating with the king amongst the enemy pawns is often decisive. If there is currently no way in, it is often worth sacrificing a pawn to open a path for the king.
- Care is necessary, as once the king has penetrated, it is poorly placed for stopping an enemy passed pawn. Thus the defender can sometimes use his own breakthrough to counter the attacker's plan.

4.4.5 Passed Pawns

In general, it is better to blockade a passed pawn with the king rather than with the bishop,

since if the king stands on a square of the opposite colour to the enemy bishop then it cannot be driven away. When the bishop is the blockader, it can be attacked by the enemy bishop and either exchanged or driven off. In the following position, White could have drawn had he put his own passed pawn to good use.

B



Benoit – Scheipl
Strasbourg 1974

Black has the advantage of an advanced outside passed pawn, and he only needs to be able to attack g1 with his bishop to drive away the white bishop. However, his winning chances are reduced by the limited amount of material remaining on the board. General principles are not very helpful here, and only by precise calculation can one determine whether Black's advantage is sufficient to win. According to Marić in *Informator 17* Black can win, but as we shall see White can draw if he finds the right idea.

1...♗b8

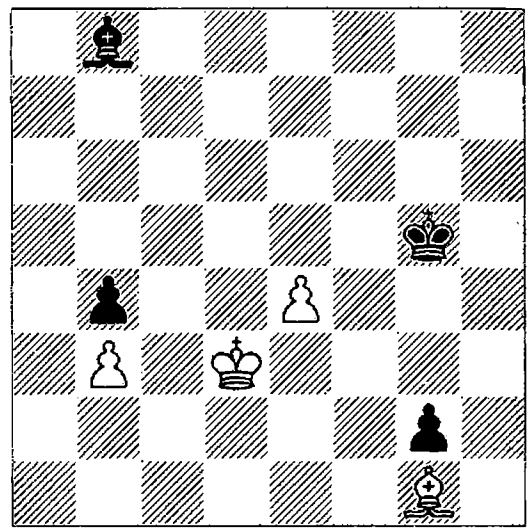
The threat of ...♗a7+ forces White to move his king and thus give Black's king access to e5.

2 ♔c4?

White immediately goes wrong and makes a fatal mistake. 2 ♔d3! was correct, and the critical position arises after 2...♔e5 3 ♗h2+ ♔f6 4 ♗g1 ♔g5 *(D)*.

Here Marić only considered 5 ♔e2?, which loses to 5...♔g4 6 ♔f2 ♔h3 7 ♔f3 (trying to keep the king out of g3 for as long as possible) 7...♗d6 (now White is in zugzwang and must give way) 8 ♔e2 ♔g3 9 ♔d3 (9 ♗d4 ♔h2 10 e5 ♗e7 11 ♔d3 g1♕ 12 ♗xg1+ ♔xg1 also wins for Black) 9...♔f3 10 ♔d4 ♗g3 11 ♔d3 ♗f2 12 ♗h2 ♗e3 13 e5 ♗f4 14 e6 ♗xh2 15 e7 g1♕ 16 e8♕ ♕f1+ with an extra piece for Black.

W



The correct move is 5 e5!. Even in defence, tactical points are important. Here White exploits a little trick to push his e-pawn to e6, which provides enough counterplay to save the game: 5...♔f4 (5...♗xe5 6 ♔e4 followed by ♔f3 wins the g-pawn, while 5...♔f5 6 e6 ♗d6 7 ♔e2 is also a draw) 6 e6 ♗d6 7 ♔e2 ♔g3 8 ♔d3 ♔f3 9 ♗a7 with a draw as Black is unable to make progress.

2...♔e5! 3 ♔xb4

After 3 ♔d3 White has lost a vital tempo and now Black wins by 3...♔f4 4 ♗e3+ ♔f3 5 ♗c5 ♗g3 6 ♗g1 ♗f2 7 ♗h2 ♗e3 as in the note to White's second move.

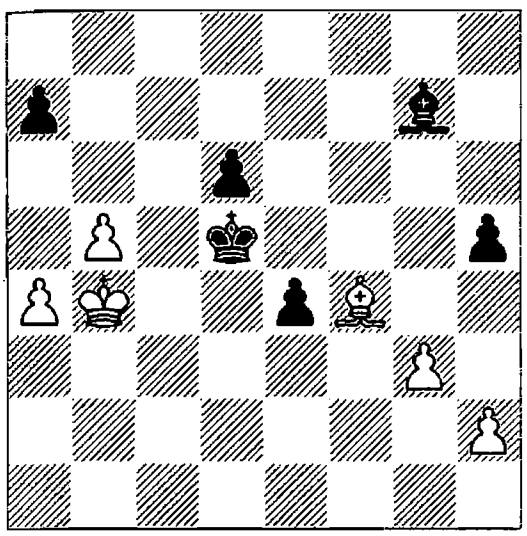
3...♔xe4 4 ♔c4

After 4 ♔a5 ♗f4 5 b4 ♗d2 6 ♔a4 ♗e3 7 ♗h2 ♔f3 Black wins by playing his king to h3.

4...♗f4 5 b4 ♗e3 6 ♗h2 ♔f3 7 ♔d3 ♗b6 8 b5 ♔g4 0-1

When both sides have passed pawns, matters are more complicated, because it's necessary to strike a balance between helping your own pawns and restraining the opponent's.

In the following diagram, Black has two connected passed pawns in the centre, but White has the possibility of creating an outside passed pawn on both flanks. The question is whether Black's advantage is sufficient to win, or whether White's counterplay is enough to save the game. Hort's notes in *Informator 17*



J. Přibyl – Prandstetter
Czechoslovak Ch, Rimavska Sobota 1974

indicate that White is losing, but I believe he could have drawn with correct play.

1 a5

Not 1 ♗e3? ♗d4 2 ♗xd4 ♔xd4 3 ♔b3 ♔d3 4 a5 e3 5 b6 axb6 6 a6 e2 7 a7 e1♕ 8 a8♕ ♕b1+ and White loses his queen.

1...♗d4

Forced, to stop b6 followed by a6.

2 ♔b3

This is also compulsory, or else White must surrender his bishop at once after ...e3.

2...e3

2...♔c5 also fails to win after 3 b6 ♔c6 4 bxa7 ♗xa7 5 h3 d5 6 g4 hxg4 7 hxg4, when White's far-separated pawns balance Black's connected ones.

3 ♔c2 ♔c4 4 b6?

This is the losing move. White could have drawn by 4 ♗xd6, and now:

1) 4...♗c3 5 ♗f4! (not Hort's 5 ♗c5? e2 6 ♗f2 ♗xa5, which is winning for Black) and Black should take a draw by 5...♗d4 since after 5...e2?! 6 ♗d2 e1♕ 7 ♗xe1 ♗xe1? 8 b6 axb6 9 a6 White promotes a pawn.

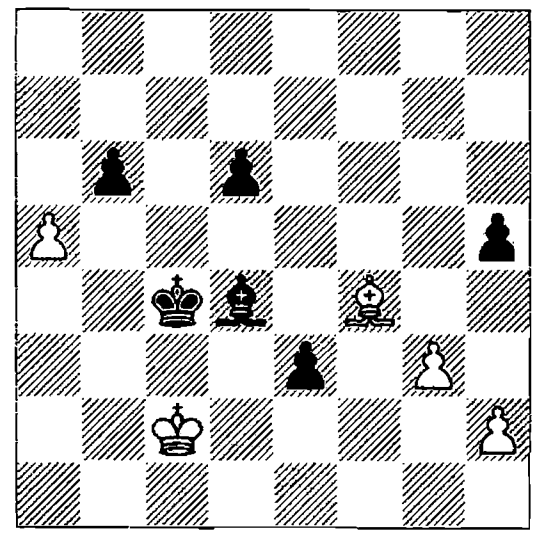
2) 4...e2 5 ♔d2 ♗c3+ 6 ♔xe2 ♗xa5 7 h3 and there are no winning chances for either side.

4...axb6 *(D)*

5 a6

Black also wins after 5 axb6 ♗xb6 6 ♗xd6 ♗a5 7 ♗f4 ♔d4 8 h3 ♔e4 9 ♗g5, and now:

1) 9...♔f3? (the only move considered by Hort, but it allows White to draw) 10 g4 e2 11 ♗h4 ♗d8 12 ♗e1 h4 13 ♔d3 ♗g5 and now:



1a) 14 ♗b4? loses to 14...♔f2! 15 ♔e4 ♗e7! 16 ♗c3 e1♕+ 17 ♗xe1+ ♔xe1 18 ♔f4 ♔f2! 19 g5 ♗xg5+ 20 ♔xg5 ♔g3.

1b) 14 ♗c3! is the drawing move, not mentioned by Hort. After 14...♔f2 15 ♔e4 ♗f6 (15...♗c1 16 ♔f5! is also a draw) 16 ♗d2 e1♕+ 17 ♗xe1+ ♔xe1 18 ♔f5 White gains a vital tempo and saves the game.

2) 9...e2! 10 ♗d2 e1♕ 11 ♗xe1 ♗xe1 12 ♔d1 ♗f2! (12...♗xg3? 13 ♔e2 is a draw as the king can reach the h1-corner) 13 ♔e2 ♗d4! (the only move to win; the bishop must stay on the a7-g1 diagonal to prevent White's king from reaching h1, but it must also cover g7 so as not to waste a tempo stopping the g-pawn later) 14 g4 h4 15 g5 ♔f4 16 g6 ♔g3 17 g7 ♗xg7 18 ♔f1 ♗d4 and Black wins.

5...b5 6 ♗xd6 b4

Black's pawns are racing forward and White must give up his bishop immediately.

7 ♗xb4 ♔xb4 8 ♔d3 ♗a7 9 h3

9 h4 ♔b5 10 g4 hxg4 11 ♔e2 g3 12 ♔f3 g2 is winning for Black.

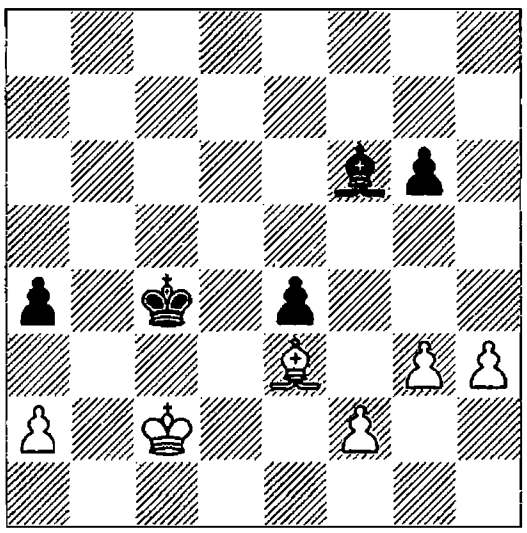
9...♔b5 10 g4 hxg4 11 hxg4 ♔c6! 0-1

It's a simple win because the king takes the g-pawn, and then returns to support the e-pawn.

The next example is fascinating throughout its several stages and is a good illustration of how the three basic types of endgame skill may all be necessary to handle a position correctly: knowledge, because some lines depend on knowing the general principles of ♕+♙ vs ♕; calculation, to work through the complications;

and imagination, to spot the unexpected blow in the note to Black's 15th move.

W



Ubilava – G. Kuzmin
USSR Cup 1984

This is a difficult ending to assess. White is a pawn up, but Black's king is in an active position and two of White's kingside pawns are currently on dark squares. If White could create a passed pawn by playing g4 and h4-h5 then he would win easily, but Black can prevent White from executing this advance. The *Informator 37* notes by Ubilava and Gaprindashvili maintain that White was winning throughout this ending, but as we shall see it was only at a rather late stage that the position drifted over the border between a draw and a win.

1 h4

After 1 g4 g5 White's kingside pawn-majority is crippled and it is hard for him to make progress; for example, 2 ♗c1 ♗e7 3 ♔d2 ♗d8 4 ♔e3 ♔d5 5 ♗b2 ♗b6+ 6 ♔e2 ♗d8 and Black can simply wait.

1...♗e7

Awaiting events is the most reliable defence. The attack on the h4-pawn prevents White from playing g4, which means that White must somehow activate his king in order to create winning chances.

1...♔b4?! is another idea, but although perhaps not losing, this is definitely more risky after 2 ♗c1!, which prevents ...♔a3, and prepares ♔d2-e3:

1) 2...♗d4? (it's a mistake to go after the f2-pawn if it allows White to create a strong passed h-pawn) 3 g4 ♗xf2 4 h5 gxh5 5 gxh5 ♗d4 (5...e3 loses to 6 ♔d3, while after 5...♔c4 6 h6 e3 7 h7 e2 8 ♗d2 ♗d4 9 ♗a5! ♗e5 10 ♔d2 e1♕+ 11 ♔xe1 ♔d3 12 ♗b4 there is no real defence against the threat of ♔d1-c1, ♗a3 and ♗b2) 6 h6 a3 (or else ♗b2) 7 ♗g5 (intending ♗e7-f8-g7) 7...♔c4 8 h7 (8 ♗e7 e3 9 ♗g5, putting Black in zugzwang, also wins) 8...♔d5 (8...♔b4 9 ♗e7+ ♔a4 10 ♔d2 and Black loses as he is in zugzwang) 9 ♗c1 followed by ♗xa3 and ♗b2.

2) 2...♔c4 3 ♗b2 ♗e7 4 ♔d2 ♗d8 5 ♔e3 ♔d5 is better, although White has definitely improved his position by transferring his king to e3.

2 ♔d2

White intends to move his bishop and then play ♔e3.

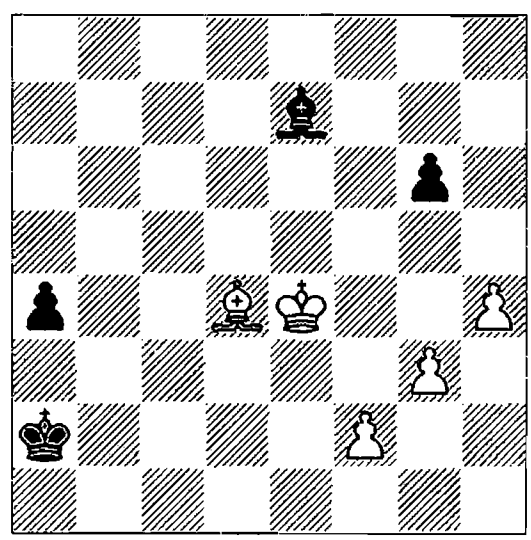
2 ♗g5? allows Black an immediate draw by 2...♗xg5 3 hxg5 ♔d4 4 ♔d2 a3 since 5 ♔e2 allows 5...♔c3, while 2 ♗c1 ♗c5 is a waste of time because 3 g4?? ♗xf2 4 h5 gxh5 5 gxh5 e3 even wins for Black, so White must return by 3 ♗e3.

2...♔b4

Black defends actively, heading for the a-pawn even though this allows White to set his own pawns in motion. If followed up correctly, this is a good plan of defence.

3 ♗d4 ♔a3 4 ♔e3 ♔xa2 5 ♔xe4 *(D)*

B



White intends to play f4-f5, creating two connected passed pawns on the kingside. He will be happy to give up his bishop for the a-pawn, but White's problem is that Black can

play to block the long diagonal and prevent White from giving up his bishop.

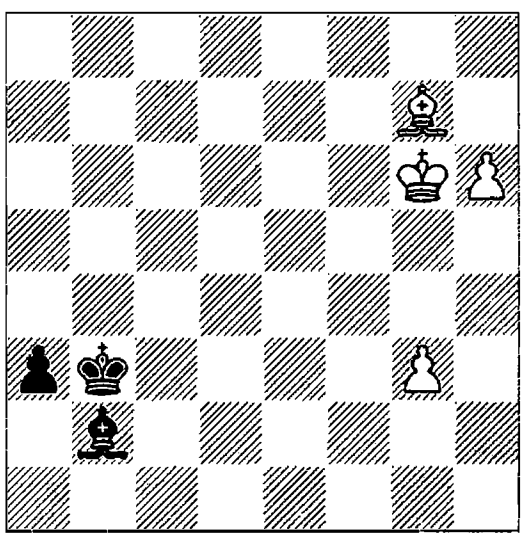
5...♔b3 6 f4 a3 7 f5 gxf5+ 8 ♔xf5

White has a pawn more but Black's pawn is further advanced. Only White can have winning chances, but Black can defend. The main problem for Black is that all the lines leading to a draw require him to defend with queen against queen and pawn. Such positions are notoriously difficult to defend in practice even if they are drawn in theory.

8...♗b4

8...♔c4 leads to similar play after 9 ♗e5 ♗b4 10 h5 ♗d2 11 ♔g6 ♗c1 12 h6 ♗b2 13 ♗g7 and now 13...♔d3 14 g4 ♗xg7 15 hxg7 a2 16 g8♕ a1♕ is a drawn ♕ vs ♕+♙ position. However, 8...a2? is wrong since White wins by 9 h5 ♗a3 10 h6 ♗b2 11 ♗xb2 ♔xb2 12 h7 a1♕ 13 h8♕+.

9 h5 ♗d2 10 ♔g6 ♗c1 11 h6 ♗b2 12 ♗g7 *(D)*



The last few moves have been forced for both sides but now we have reached a curious position in which Black cannot push his a-pawn (as ...a2 loses to ♗xb2 followed by h7) while White cannot push his h-pawn (as h7 allows ...♗xg7 followed by ...a2, leading to a perpetual check in the queen ending). Moreover, both sides have to be aware of the possibility of exchanging bishops, which usually leads to a ♕+♙ vs ♕ ending, but may not if one side promotes with check. The evaluation of the various queen endings is obviously crucial, and at home one can determine the result by consulting a database, but over the board it's a different matter and it is necessary to fall back on general principles. The key point here is that in an ending of queen vs queen and g-pawn, Black's king is best posted near the a1-corner, and if the g-pawn is still on the fifth rank, then Black should be able to draw if his king is near a1. Having said this, defending such endings is a thankless task.

12...♔c2!

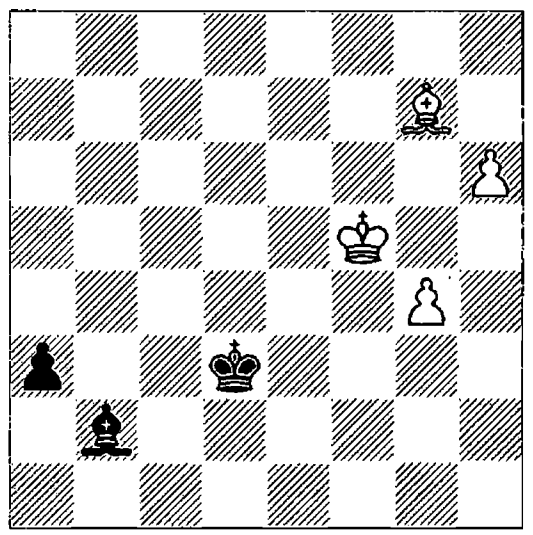
12...♔c4 13 ♔f5 ♔d3 14 g4 ♔c2 still remains within the bounds of a draw, but there is no reason for Black to allow White to advance his g-pawn for free.

13 g4 ♔d3?!

This doesn't actually lose, but it's not a very good move. Black should have played 13...♗xg7! 14 hxg7 a2 15 g8♕ a1♕ with a draw; for example, 16 ♕c4+ ♔d2! (Black would prefer to move towards a1, but cannot move to b1 or b2 without allowing the exchange of queens) 17 ♕f4+ ♔c2 18 g5 ♕a6+ 19 ♕f6 ♕b7 and with his king so near a1, Black is within the drawing zone.

14 ♔f5 *(D)*

This causes Black the most difficulties. White's king no longer obstructs the g-pawn in a queen ending and in some lines White can move his king towards the enemy to cause further problems. 14 ♗xb2 axb2 15 h7 b1♕ 16 h8♕ causes fewer problems as here White's pawn is only on the fourth rank.



14...♔e3

Not 14...♗xg7? 15 hxg7 a2 16 g8♕ a1♕ 17 ♕d5+ ♔c2 18 ♕c4+ ♔d2 19 ♕f4+ ♔c2 20

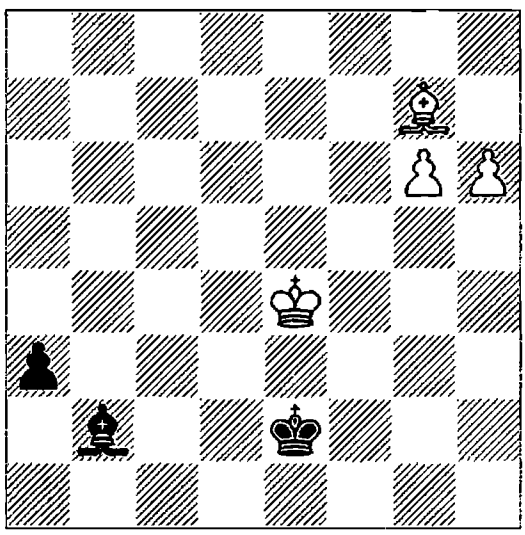
♕f2+ (unfortunately for Black, the poor position of his queen makes it hard for his king to approach a1 without allowing a queen exchange) 20...♔d3 (20...♔b3 21 ♕e3+ ♔c2 22 ♕e2+ ♔b3 23 ♕d3+ ♔b4 24 g5 is also lost for Black) 21 g5 and White can win, although it is a very lengthy process since Black's king is only just outside the drawing zone.

15 g5 ♔f3?

Black is apparently not aware of the 'a1-corner' principle and strays with his king in the wrong direction. The other possibilities are:

1) 15...♔e2? (also wrong) 16 ♔e4! ♔d2 (16...♗xg7 17 hxg7 a2 18 g8♕ a1♕ 19 ♕c4+ ♔e1 20 g6 is a win since the pawn is already on the sixth rank, Black's king is poorly placed and White's pieces are well-centralized) 17 g6 ♔e2 *(D)* (17...♗xg7 18 hxg7 a2 19 g8♕ a1♕ 20 ♕d5+ ♔e1 21 ♕e5! ♕a8+ 22 ♔f4+ ♔f1 23 g7 is a relatively simple win for White).

W

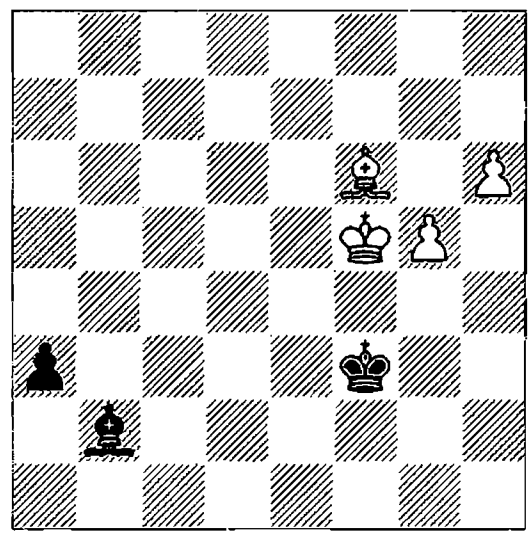


Now the only winning move is the remarkable 18 ♗h8!! and after 18...♔f2 (18...♗xh8 19 g7 ♗xg7 20 hxg7 a2 21 g8♕ a1♕ 22 ♕g2+ costs Black his queen) 19 g7 a2 20 g8♕ a1♕ 21 ♕f7+ ♔g3 22 ♗xb2 (22 ♕f4+ ♔h3 23 ♗xb2 ♕xb2 24 ♔f5 also wins, but more slowly) 22...♕b1+ (after 22...♕xb2 23 ♕g7+ White wins at once) 23 ♔e3 ♕g1+ 24 ♔d3! ♕d1+ 25 ♔c3 ♕e1+ 26 ♔d4 ♕d2+ 27 ♔e4 ♕c2+ 28 ♔e3 ♕c5+ 29 ♗d4 the checks eventually run out.

2) 15...♔d2! is the only drawing move; after 16 ♔f4 (or 16 ♗f6 ♗xf6 17 gxf6 a2 18 h7 a1♕ 19 h8♕ and Black can force immediate perpetual check; for example, 19...♕f1+ 20 ♔g6 ♕g2+ 21 ♔f7 ♕d5+ 22 ♔g7 ♕g2+ 23 ♔h7 ♕e4+ 24 ♔g8 ♕a8+!) 16...♔d3! (again the only move; 16...♔c2? 17 ♔e3 ♗c1+ 18 ♔e2 ♗b2 19 g6 puts Black in zugzwang and White wins after 19...♔b3 20 ♔d2 or 19...♗xg7 20 hxg7 a2 21 g8♕ a1♕ 22 ♕c4+ ♔b1 23 ♕b3+ ♔c1 24 ♕d1+) 17 ♔f3 (17 ♗xb2 axb2 18 h7 b1♕ 19 h8♕ ♕f1+ is a draw) 17...♔d2! 18 ♔f2 ♔d3! 19 ♗xb2 (otherwise White is not making progress) 19...axb2 20 h7 b1♕ 21 h8♕ ♕b6+ 22 ♔g3 ♕e3+ Black gives perpetual check.

16 ♗f6! *(D)*

B



Now White is threatening h7, so Black must take, but his king is badly placed and White's pawn is already on the sixth rank.

16...♗xf6 17 gxf6 a2 18 f7

Not 18 h7? a1♕ 19 h8♕ ♕b1+ with perpetual check.

18...a1♕ 19 f8♕ ♕b1+

19...♕d4 would have offered more resistance, but 20 ♕e8 ♕f4+ 21 ♔g6 ♕g4+ 22 ♔f6 ♕f4+ 23 ♔g7 ♕d4+ 24 ♔g8 ♕g4+ 25 ♔f8 ♕b4+ 26 ♕e7 ♕b8+ 27 ♔g7 ♕g3+ 28 ♔f7 brings the checks to an end and wins.

20 ♔g5+ ♔g2 21 ♕f5 ♕c1+ 22 ♔h5 1-0

After 22...♕h1+ 23 ♔g6 Black has no checks and White wins relatively easily.

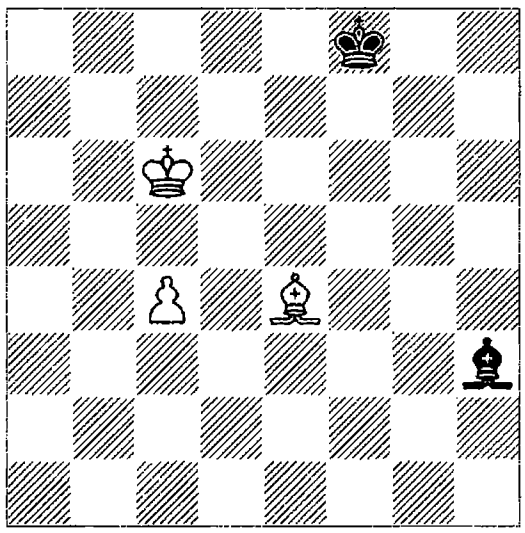
Summary:

- It's easy to make mistakes in positions involving passed pawns, since these tend to be very tactical.

- Two connected passed pawns constitute a formidable force, but it's also difficult to stop two widely-separated passed pawns.
- When both sides have passed pawns, one idea is to give up the bishop for the most dangerous of the enemy's pawns. This can gain enough time to force one's own passed pawns home.

4.4.6 Extra Passed Pawn

While I do not intend to examine the ending of ♗+♙ vs ♗ in any detail, I shall take a look at one example that features some instructive points.



Minasian – Marin
European Ch, Batumi 2002

This ending is interesting not only for the play, but also for Postny's notes in MegaBase, which show how even a strong player can totally misassess a quite simple position. It should be noted that this game was played in 2002, when the 5-man tablebases had already been available (online, if necessary) for several years, so there really isn't much excuse for producing such totally wrong annotations. Postny refers to this position as a "theoretical draw", although it is winning for White. The position remains winning throughout the subsequent play, although in the game White had trouble finding the correct winning method.

1 ♔d6?!

This retains the win, but is a step in the wrong direction. The winning plan involves playing the king to b6 and not d6, after which Black's bishop can be driven away from its control of the c6-square as follows: 1 c5 ♔e7 2 ♔b6 ♗d7 3 ♗c6 ♗h3 4 ♗b5 ♗g2 5 ♗a6, followed by ♗b7, after which the pawn advances. This manoeuvre is typical in that with the king on b6 and bishop on b7, Black cannot exchange bishops, but if Black moves his bishop off the long diagonal then White can immediately advance his pawn. This also demonstrates why the best defence is often to play the defender's king behind the pawn. For example, if Black's king were on b4 (with White's king on b6) then the manoeuvre of the bishop to b7 would not be possible as Black could simply exchange bishops. In this case the position would be a draw, but in the game Black's king is poorly placed to move behind the pawn and this defence is not feasible.

1...♗f1 2 c5 ♗b5 3 ♗c6 ♗e2 4 ♗a4 ♗f3

According to Postny, "There are two, long enough, diagonals, where the black bishop can stop the white pawn, and White certainly can not control both of them." But actually the length of the diagonals is irrelevant; in bishop and pawn vs bishop endings, in the absence of the defender's king, the attacker can always force the advance of the pawn. If Black's king were further away, then playing the bishop to d5 would do the trick, but with the king so close the correct procedure is, as already noted, to play the king to b6 and the bishop to b7. The length of the diagonals is much more of a factor when Black's king is behind the pawn, but that is not the case here.

5 ♗d7?!

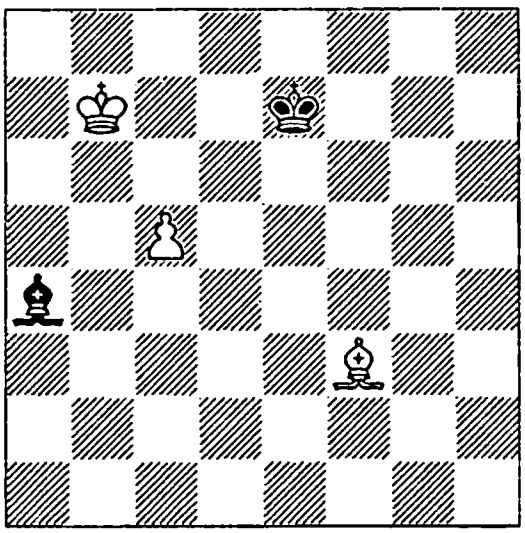
White has made it slightly more difficult for himself, but he can still win by 5 ♗b5 ♗g2 6 ♗a6 ♔e8 7 ♔c7 ♔e7 8 ♔b6 ♔d7 9 ♗b7. Then one line is 9...♗h3 10 c6+ ♔d6 11 c7 ♗g4 12 ♗a6 ♗f5 13 ♔b7 ♗g4 14 ♔b8 ♔c5 15 ♗c8 ♗e2 16 ♗h3 ♗a6 17 ♗f1 and the pawn promotes.

5...♗g2 6 ♗c6 ♗f1 7 ♗f3 ♗b5 8 ♗h5 ♗a4 9 ♗f3 ♗b5 10 ♗b7 ♗a4 11 ♗c8 ♔e8 12 ♔c7

"White refuses to accept the inevitable draw, and continues to make the moves in order to tire his opponent ..." This is the only move to win, since White must prevent ...♔d8, so I doubt if it was made just "to tire the opponent".

12...♔e7 13 ♗g4 ♗e8 14 ♗f3 ♗a4 15 ♔b7 *(D)*

B



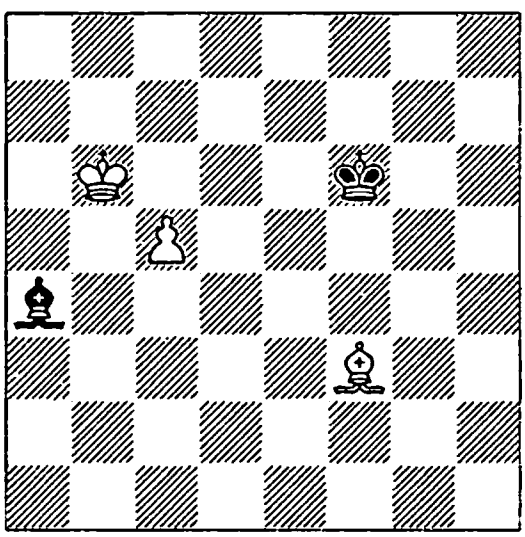
Over the past 14 moves, White hasn't made any progress at all and has still not hit upon the king to b6 and bishop to b7 plan.

15...♔f6

"A pretty strange move, however does not spoil anything. Still after 15...♔d8 it's simple theoretical draw" according to Postny, but it isn't since 16 ♗c6 ♗d1 17 ♔b6 ♗c2 (17...♔c8 18 ♗b7+) 18 ♗b5 ♗e4 19 ♗a6 followed by ♗b7 still wins.

16 ♔b6 *(D)*

B



At last White puts his king on the correct square.

16...♔e5?!

Double question mark according to Postny: "Quite a shocking mistake on such a high level of chess! Where does the king go?! It was not too late to come back with the king 16...♔e7 =". But of course even in this case White wins by 17 ♗c6 ♗d1 18 ♗b5 ♗f3 19 ♗a6, etc. However, this would have been a better practical chance as White might still not have hit on the correct plan.

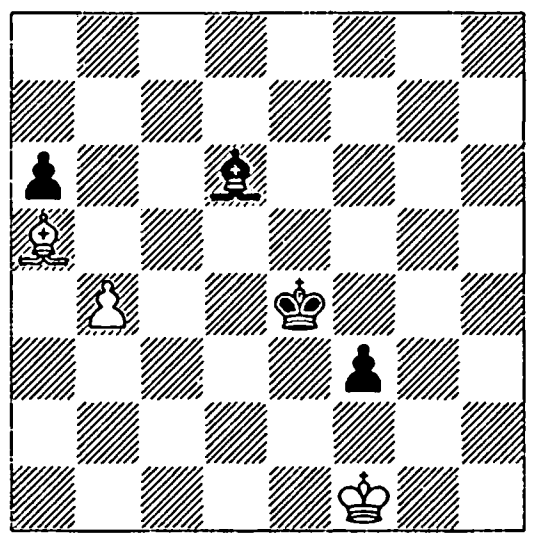
17 ♗e2 ♔d4

Black is trying to get his king behind the pawn, but he is much too slow. 17...♔e6 18 ♗b5 ♗d1 19 c6 is also winning for White.

18 ♗b5 ♗d1 19 c6 ♗g4 20 c7 ♔d5 21 ♗e2 ♗c8 22 ♗a6 ♗g4 23 ♔b7 ♔c5 24 ♔b8 ♔b6 25 ♗c8 ♗f3 26 ♗f5 ♗b7 27 ♗d3 1-0

In the following position, the defender's king is blocking the passed pawn, so Black can only make progress by capturing the b4-pawn. The play is quite subtle and depends on various zugzwang positions.

B

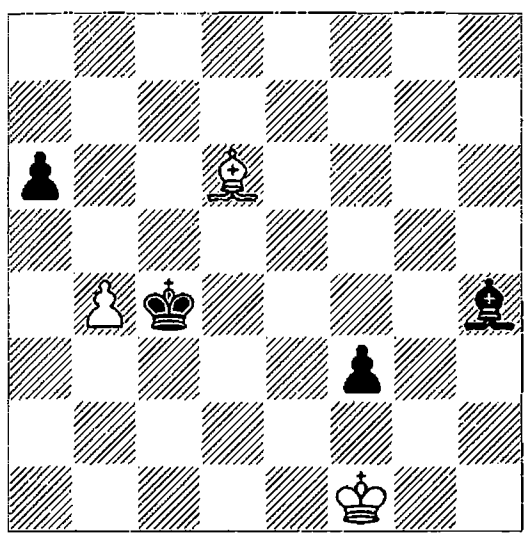


Gheorghiu – Arakhamia
Aosta 1990

White's position looks grim. He is a pawn down, Black's pieces are active and the a5-bishop is totally immobilized by Black's attack on the b4-pawn. Nevertheless, Black has no immediate win; for example, 1...♗g3 2 ♗d8 ♔d3 3 ♗e7 ♔c4 4 ♗f8! (the only move, since 4 ♗c5?! a5 and 4 ♔g1?! ♗e1 lose at once) 4...♗e5? (Black can still win by shifting to a different plan, as in the analysis below, but the point I wish to make here is that Black cannot win by simply heading for the b-pawn directly) 5 ♔f2 ♗c3 6 ♗e7! (6 ♔xf3? loses to 6...♗xb4 7 ♗g7 ♔d3) 6...♗xb4 7 ♗d8 and it takes Black far too long to cut off the white bishop from a5.

Thus in order to win, Black must proceed with more subtlety. In such complex positions,

it helps to identify target positions which are winning **whoever is to move**. Such positions are a massive help in analysis, because if you can reach one, you don't need to worry about calculating who is to play and don't need to consider possible tempo-losing manoeuvres.



Gheorghiu – Arakhamia
Analysis diagram

This is such a target position. First of all, suppose that White is to play. Then it is relatively simple for Black to win; White cannot play ♗c5 due to ...a5 and he cannot play ♔g1 due to ...♗e1, so the only move is 1 ♗f8. Then after 1...♔d5 White is in zugzwang; his bishop no longer has a safe square on the c5-f8 diagonal, so he has the choice between 2 ♔g1 ♗e1 3 ♔f1 f2 4 ♔e2 ♔c4 5 ♗d6 ♗xb4 6 ♗c7 ♗c5 and 2 ♗h6 ♗e7 3 ♔f2 ♔e4 4 ♗d2 ♔d3 5 ♗f4 ♗xb4 6 ♔xf3 a5, with a simple win in both cases.

Now suppose that Black is to move first; how can she lose a tempo? The solution is quite attractive.

1...♔d4! 2 ♗c5+

2 ♗f8 ♔d5 is zugzwang at once, while 2 ♔g1 ♗e1 3 ♔f1 f2 is a comfortable win for Black.

2...♔d5

Threatening ...a5.

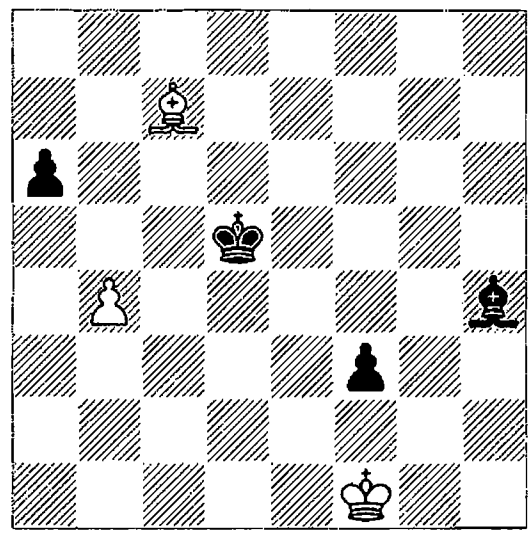
3 ♗f8 ♔e6! 4 ♗c5

4 ♗h6 ♔e5 5 ♗g7+ ♔e4 is also winning for Black, as 6 ♗f8 ♔d5 is zugzwang, and other moves allow ...♗e7.

4...♔e5!

By triangulating around d5, Black always prevents the bishop from moving to f8.

5 ♗b6 ♔d5 6 ♗c7 *(D)*



Or else ...♔c4 wins, since the bishop cannot move to c5.

6...♔d4 7 ♗d6

7 ♗f4 ♗e7 and 7 ♗b6+ ♔c4 8 ♗a5 ♗g3 9 ♔g1 ♗e1 are also winning for Black.

7...♔c4

We have returned to the starting position, but with White to play.

Now let's go back to the game position.

1...♔e3

The most efficient winning plan was given by Liogky and Moskalenko in *Informator 50* and involves transferring the bishop to the h4-e1 diagonal. Taking into account the analysis diagram, it's clear that this plan wins since it's obvious that Black will be able to reach that position with one side or the other to move. The winning line runs 1...♗e7! 2 ♔f2 ♗h4+! 3 ♔f1 (now White's king is paralysed, since ♔g1 can usually be met by ...♗e1) 3...♔d4!. This finesse makes the win easier; the analysis diagram shows that Black is still winning even if she allows White to transfer his bishop to the a3-f8 diagonal, but in this position there is no need to allow this and it only makes the win harder. Liogky and Moskalenko considered the position after 3...♔d5 4 ♗c7 ♔c4 5 ♗d6 to be a draw, but we know from the analysis diagram that it is a win. After 3...♔d4!, Black wins by 4 ♗c7 (4 ♗b6+ ♔c4 5 ♗c5 a5 and 4 ♔g1 ♗e1

are even simpler) 4...♔d5! 5 ♗f4 (5 ♗b8 ♗e7 and 5 ♗a5 ♔c4 are also lost for White) 5...♗e7 6 ♔f2 ♔e4 7 ♗d2 ♔d3 8 ♗f4 ♗xb4 9 ♔xf3 a5 and the a-pawn will decide the game.

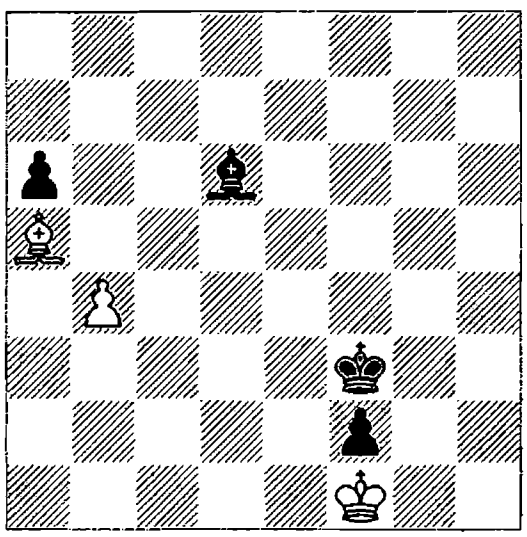
2 ♗b6+ ♔f4 3 ♗a5 ♔g3?!

This isn't the right direction for the king, and in order to win, Black must now backtrack.

4 ♔g1 f2+?

And this move throws the win away completely. Black should have gone into reverse gear by 4...♔f4!.

5 ♔f1 ♔f3 *(D)*



Black has indeed forced White into a kind of zugzwang, but only by pushing her f-pawn to f2. This has the double effect of exposing the pawn to attack, because it is now on a dark square, and of immobilizing White's king, which introduces fresh drawing possibilities based on stalemate.

6 b5?

White fails to take advantage of Black's mistake and gives away his pawn in an unfavourable way. Liogky and Moskalenko pointed out the drawing line 6 ♗d8! ♗xb4 7 ♗b6 ♗c3 (7...♗e1 8 ♗xf2 is the stalemate idea justifying White's play) 8 ♗xf2 a5 9 ♗b6! (not 9 ♗c5? ♗b4! and Black wins) 9...a4 10 ♗c5! ♗d2 11 ♗d6 ♔e3 12 ♗e7 ♔d3 13 ♗d6 ♔c4 14 ♔e2. White actually has a second, even simpler, drawing plan based on a move which Liogky and Moskalenko believed losing: 6 ♗b6! ♗xb4 7 ♗c5! (this is the point; 7 ♗xf2? a5 is indeed lost for White) and White has a perpetual attack on Black's bishop.

6...axb5 7 ♗c7

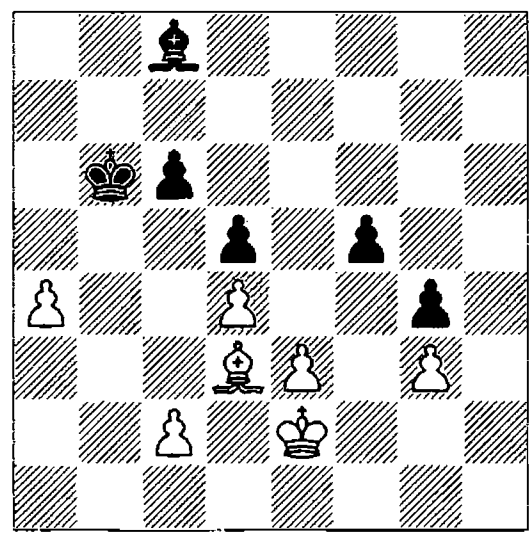
White again attempts to force stalemate, but this time it is easily refuted. 7 ♗b4 ♗f4 8 ♗d6 ♗e3 is similar.

7...♗c5 8 ♗b6 ♗e3

Now Black can move her king, lifting the stalemate.

9 ♗c5 ♔e4 0-1

An extra outside passed pawn is a major asset in any ending, but doesn't always guarantee a simple win, especially if the passed pawn isn't very far away from the main pawn-mass.



Shabanov – Raetsky
USSR 1989

1 c3!

1 c4? is wrong since after 1...♔a5 2 cxd5 cxd5 3 ♗c2 (3 ♗b5 ♗a6 is an immediate draw) 3...♔b4 (the problem with playing c4 is that Black's king gains access to the active square b4, from which it cannot be dislodged) 4 ♔d2 ♗e6 5 ♔c1 ♗c8 6 ♔b2 ♗e6 7 ♗b3 ♗f7 White is unable to make progress.

1...♗a6

According to Van Perlo, "Necessary was again 1...♔a5. White has to reply 2 ♗c2 and cannot make progress after that". This is a curious opinion, because Raetsky's notes in *Informator 47* indicate (correctly) that White wins even after 1...♔a5, and when Van Perlo copies notes from *Informator*, he normally does so accurately. Indeed, after 1...♔a5 2 ♗c2 ♗a6+ (2...♗e6 3 ♔d2 is similar) 3 ♔d2 ♗c8 4 ♔c1 ♗e6 5 ♔b2 ♗c8 6 ♔b3 ♗e6 7 c4! (this is clearer than Raetsky's 7 ♗d3, when 7...c5 allows Black to confuse the

issue) 7...♗c8 (7...dxc4+ 8 ♔c3 leaves Black in a fatal zugzwang) 8 ♗d3 ♗e6 we have transposed to the game.

The move played looks very good, as the king and pawn ending arising after the exchange of bishops is drawn. However, White has a surprising reply.

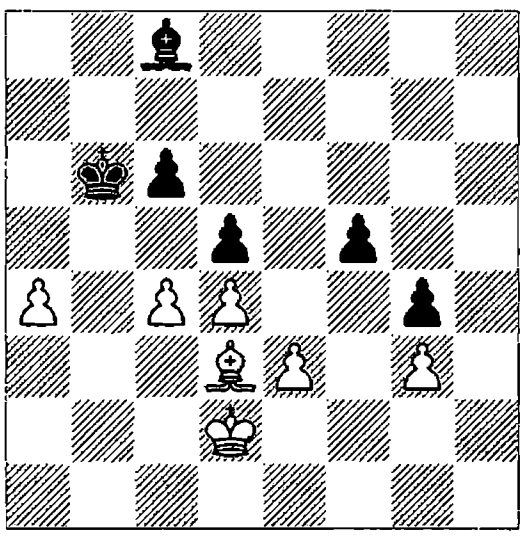
2 c4!

The move that failed last move now succeeds. Spotting such 'hesitation moves' can be tricky because of the psychological block against playing something which was rejected the previous move.

2...♗c8

There is nothing better than to return to c8. 2...♗xc4 3 ♗xc4 dxc4 4 ♔d2 ♔a5 5 ♔c3 ♔xa4 6 ♔xc4 is an easy win for White, 2...♔a5 3 ♗xf5 ♗xc4+ 4 ♔d2 ♔xa4 5 ♗xg4 gives White a decisive passed g-pawn and finally 2...dxc4 3 ♗xf5 c3+ 4 ♔d1 ♔a5 5 ♔c2 ♔b4 6 ♗xg4 leaves White too far ahead on material.

3 ♔d2 *(D)*


B

3...♗d7

Allowing the white king to reach b3 makes life easy for White, but even after 3...♔a5 4 cxd5 cxd5 5 ♗b5 ♔b4 (in contrast to the note to White's first move, White's king is on d2 rather than e2, and so Black's ...♗a6 does not pin the bishop) 6 ♔d3 ♗e6 7 ♗e8 White wins; for example, 7...♗g8 8 ♗d7 ♗h7 9 ♔d2 ♗g6 10 ♗e6 ♔xa4 11 ♗xd5 ♔b4 12 e4! fxe4 13 ♔e3.

4 ♔c3 ♔a5 5 ♔b3 ♗e6 6 cxd5 cxd5 7 ♗b5 ♗c8 8 ♗c6 ♗e6 9 ♗e8 1-0

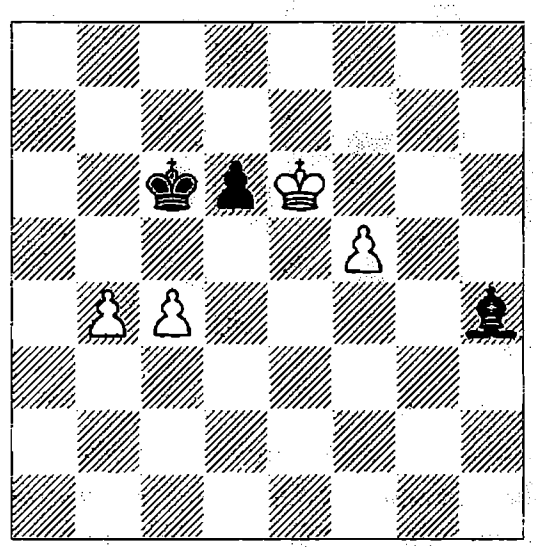
Black is in zugzwang and White wins easily; for example, 9...♗c8 10 ♗f7 ♗b7 11 ♗e6 ♗c6 12 ♗xf5 ♗xa4+ 13 ♔c3 ♗d1 14 ♔d3 ♔b6 15 e4 dxe4+ 16 ♔xe4 ♔c6 17 ♔f4 ♔d5 18 ♗xg4.

Summary:

- An extra passed pawn is a large advantage in a bishop ending. Even in ♗+♙ vs ♗, there are often winning chances, provided the defender cannot bring his king in front of the pawn.
- Difficulties can arise in two situations: the first is if there is a limited amount of material remaining on the board, and the second is if the passed pawn is close to the remaining pawn-mass.

4.4.7 Transformation to a Queen Ending

Practically all types of ending can be transformed into a queen ending if one or both sides promote. A common mistake in this situation is to assume that if the attacker promotes and the defender does not, then the attacker will necessarily win. In the following position Black made this mistake and as a result missed a draw (although only one side has a bishop in this example, it fits naturally into this section).


B

Bologan – Lupulescu
European Ch, Dresden 2007

This position is unpleasant for Black as White has two passed pawns, one of them actively supported by his king. Black can draw, although he must display some imagination.

1...♗g5!

The only move, preparing to stop the f-pawn from h6. Passive defence by 1...♔c7? loses after 2 b5! (but not 2 f6? ♗xf6 3 ♔xf6 d5! 4 cxd5 ♔d6 and Black captures both pawns) 2...♗g5 3 f6 ♗h6 4 ♔e7! (4 f7? ♗f8 is a draw as the king cannot easily approach f8) 4...♗g5 5 ♔f7! ♔d7 6 ♔g6 ♗h4 (6...♗e3 7 f7 ♔e7 8 ♔g7 also wins for White) 7 f7 ♗e7 8 ♔g7, picking up the bishop with a winning position.

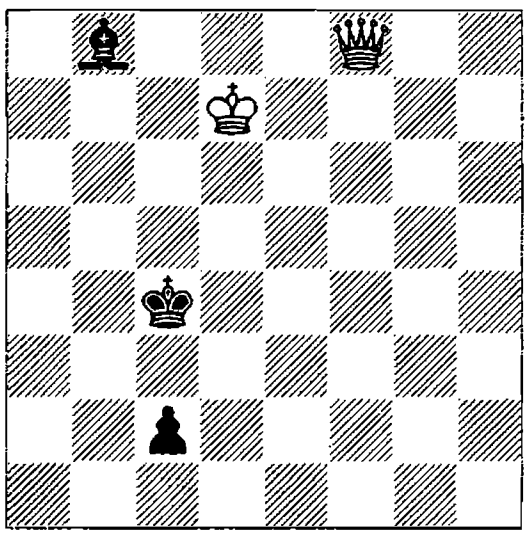
2 f6

2 b5+ ♔c5 3 f6 ♗h6 transposes to the next note.

2...♗xf6?

This is refuted by a simple in-between move. Black could have drawn by 2...♗h6! 3 b5+ (3 ♔f7 d5 is easy) 3...♔c5! 4 ♔d7 ♗f8 5 ♔c7 d5 6 b6 (6 cxd5 ♔xd5 7 b6 ♔e6 8 b7 ♗d6+ draws) 6...dxc4 7 b7 c3 8 ♔d7 ♗d6 9 f7 c2 (it looks as if it is all over for Black, since the f-pawn promotes with check) 10 b8♕ (10 f8♕ ♗xf8 11 b8♕ ♔c4 12 ♕xf8 ♔c3 is also a draw as White's king is too far away) 10...♗xb8 11 f8♕+ ♔c4 *(D)*.

W



It turns out that White is nowhere near winning here and he wouldn't be able to win even if his queen were on a more active square such as e3. After 12 ♕xb8 (12 ♕f1+ ♔b3 13 ♕c1 ♗e5 and 12 ♕a3 ♗f4 13 ♕a4+ ♔c3 14 ♕xf4 ♔b2 are also drawn) 12...♔c3 (White's king needs to be two squares closer in order to win) 13 ♕e5+ ♔d2 14 ♕b2 ♔d1 it's a clear draw.

3 b5+!

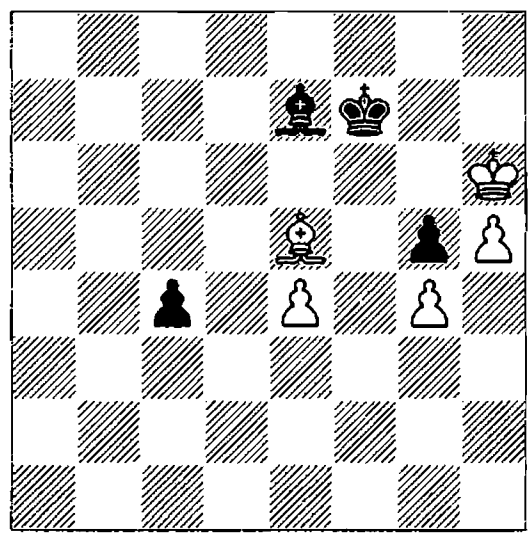
Not 3 ♔xf6? d5 with an immediate draw.

3...♔c5 4 ♔xf6 d5 5 b6! 1-0

5...♔xb6 6 cxd5 ♔c7 7 ♔e7 and White wins.

In the following position, White missed a win based on a liquidation to a queen ending, although the ♕+♙ vs ♕ position involved would have been very tough to play in practice.

B



Velimirović – Bukal
Yugoslavia 1969

White is a pawn up but both sides have passed pawns. White's h-pawn is supported by his king and although his king is currently blocking the pawn, there is no doubt that White has the advantage. Milić's notes in *Informator 7* state that White is winning and that the rest of the game was played accurately. However, as we shall see, the position is drawn and neither side played accurately.

1...♗f6!

The only move, driving White's bishop off the long diagonal and allowing the c-pawn to advance.

2 ♗d6 ♗e7?

This should have lost. 2...c3? is also bad since after 3 ♗a3 c2 4 ♗c1 ♗d8 5 e5 ♗e7 6 e6+! ♔xe6 7 ♔g6 ♗d8 8 h6 ♗f6 9 h7 ♗d4 10 ♗xg5 ♗e5 11 ♗c1 ♗f6 12 g5 White's pawns are too strong.

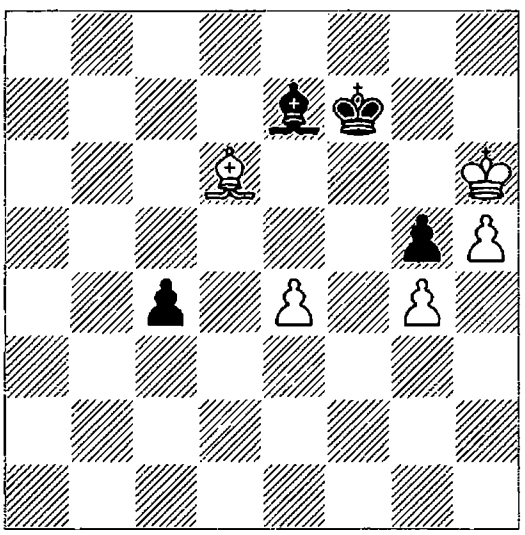
Black could have forced a draw by 2...♗b2! 3 ♔xg5, and now:

1) 3...♔e6? (the only move analysed by Milić, which he believed led to a win for White; it does, but not as a result of the line Milić gave) 4 ♗f4! c3 5 ♔g6 c2 6 h6 c1♕ 7 ♗xc1 ♗xc1 8

e5! (Milić gave 8 g5? ♗d2 9 e5, but this is only a draw after 9...♗f4!, reaching a position of reciprocal zugzwang with White to play; it is easy to see that this is a draw, as 10 h7 ♗xe5 blockades the pawns) 8...♗f4 (8...♗b2 9 g5 ♗xe5 10 ♔h7 and White wins by pushing the g-pawn) 9 g5! and now Black is to play in the reciprocal zugzwang. White wins after 9...♔e7 10 ♔f5! followed by h7 or 9...♗xe5 10 ♔h7 followed by g6.

2) 3...c3! 4 ♔f5 (4 ♗e5 ♗c1+ 5 ♔f5 c2 6 ♗c3 ♗e3 7 ♗b2 c1♕ 8 ♗xc1 ♗xc1 transposes) 4...c2 5 ♗f4 c1♕ 6 ♗xc1 ♗xc1 7 g5 ♔g7! 8 e5 ♗a3 9 h6+ ♔h7! 10 ♔f6 ♗b2! and White cannot win as 11 g6+ ♔xh6 12 g7 runs into 12...♗xe5+.

We now return to 2...♗e7? *(D)*:



3 ♗c7?

White misses his chance to decide the game by 3 ♗xe7! ♔xe7 4 ♔g6! c3 (4...♔f8 5 h6 ♔g8 6 h7+ ♔h8 7 e5 and White will promote with mate) 5 h6 c2 6 h7 c1♕ 7 h8♕ ♕c6+ (7...♕f4 8 ♕g7+ ♔e8 9 ♕g8+ ♔e7 10 e5 is a win for White, since 10...♕xg4 11 ♕f7+ ♔d8 12 e6 ♕e4+ 13 ♔g7 ♕e5+ 14 ♔g8 ♕d6 15 ♕f8+ decides the game in White's favour) 8 ♔h5! (not 8 ♔xg5? ♕c5+ 9 ♔g6 ♕d6+ 10 ♔g5 ♕c5+ 11 ♔f4 ♕f2+ with perpetual check) 8...♕xe4 9 ♕g7+! ♔e8 10 ♕f6! (a very hard move to see, threatening to win with ♔xg5; 10 ♕xg5? ♔f7! and 10 ♔xg5? ♕e3+ 11 ♔g6 ♕e4+ 12 ♔h6 ♕h1+! only lead to a draw) 10...♕f4 (there is nothing better) 11 ♕xg5 ♕f2 12 ♔g6! ♕f7+ 13 ♔h6 ♕f2 14 ♔g7 and White mates in a further 72 moves (assuming optimal play by both sides). Obviously, this is no easy win, but in general such positions are harder for the defender than for the attacker, so even if it was impossible to know over the board whether the position was a win, White could have assessed the position as offering good practical winning chances.

3...c3! 4 ♗a5 c2

4...♗f6 also draws; for example, 5 ♗b4 ♗d4 6 ♔xg5 ♗e3+ 7 ♔f5 c2 8 ♗a3 c1♕ 9 ♗xc1 ♗xc1 transposes to the analysis of 2...♗b2!.

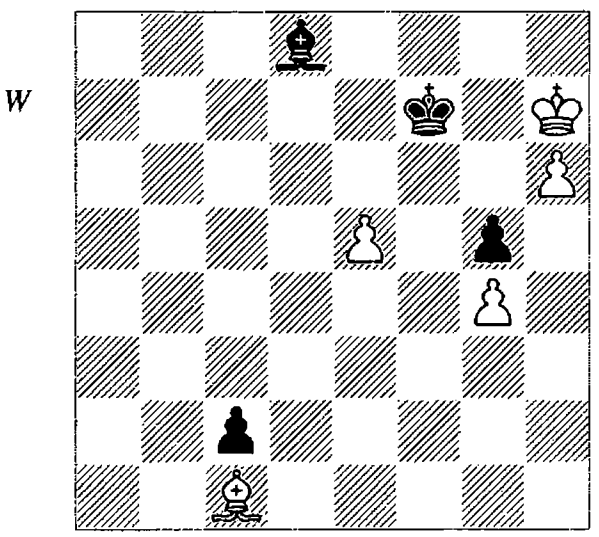
5 ♗d2 ♗f6?

This is the losing move. Black could have drawn by 5...♗a3! 6 ♔xg5 (6 ♗xg5 c1♕ 7 ♗xc1 ♗xc1+ 8 g5 ♗d2 9 e5 ♗c1 10 e6+ ♔xe6 also draws) 6...c1♕ 7 ♗xc1 ♗xc1+ 8 ♔f5 ♔g7, which is similar to the analysis of 2...♗b2!.

6 ♗c1!

Now Black can no longer promote his c-pawn and White wins.

6...♗e7 7 e5! ♗d8 8 ♔h7 ♗e7 9 h6 ♗d8 *(D)*



10 e6+!

The key idea: White offers the e-pawn to free his king.

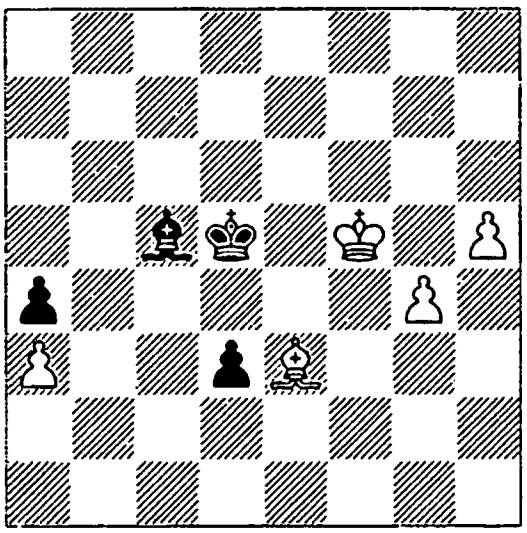
10...♔xe6 11 ♔g8 ♗f6 12 h7 ♔d5 13 ♔f7!

Not 13 h8♕? ♗xh8 14 ♔xh8 ♔e4, when White cannot save his last pawn.

13...♗d4 14 ♗xg5 ♗b2 15 ♗d2 ♔c4 16 g5 ♔d3 17 ♗f4 ♔e4 18 ♗c1! ♗xc1 19 h8♕ ♔d3 20 g6 1-0

Finally, it can sometimes happen that a direct mating attack is possible after both sides

promote, since a queen and bishop can be a formidable attacking force.



K. Movsziszian – Dautov
Böblingen 1996

White is a pawn up, but the a3-pawn is doomed so his material advantage is purely temporary; moreover, his pawns are no further advanced than Black's. However, there are two factors operating in White's favour. The first is that his connected passed pawns are slightly stronger than Black's forthcoming disconnected ones, and the second is that the g-pawn can promote with check. These advantages are sufficient to win, but extremely precise play is required. In the diagram position, 1 ♗c1? ♗xa3 and 1 ♗xc5? d2 are obviously impossible, so White must move his bishop somewhere else. Only one square wins, but which one?

1 ♗d2!

This is the correct choice. The only other realistic possibility is 1 ♗f4? (1 ♗g5? and 1 ♗h6? block the kingside pawns) but this allows Black to draw by giving away the d3-pawn: 1...♗xa3 2 g5 ♗b2 3 g6 a3 4 h6 d2! 5 ♗xd2 a2 6 g7 ♗xg7 7 hxg7 a1♕ 8 g8♕+ ♔c5 9 ♕c8+ ♔d5 10 ♕b7+ ♔c4 11 ♕b4+ ♔d3 and the king slips away.

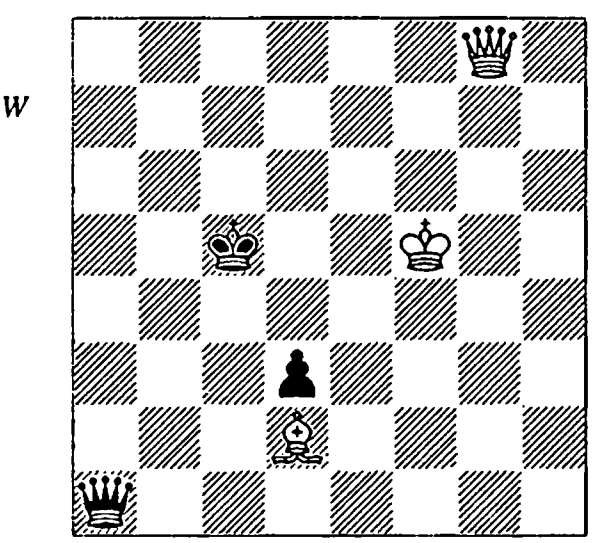
1...♗xa3 2 h6 ♗b2

After 2...♗f8 3 g5 a3 4 g6 ♗xh6 (4...a2 5 g7 ♗xg7 6 hxg7 transposes to the game) 5 ♗xh6 a2 6 g7 a1♕ 7 g8♕+ the position is the same as in the game except for the position of White's bishop. This makes little difference and White wins very much as in the game continuation.

3 g5 a3 4 g6 a2 5 g7 ♗xg7

5...a1♕ 6 g8♕+ ♔c5 7 ♕c8+ gives White a decisive attack; for example, 7...♔d4 8 ♕d7+ ♔c5 9 ♕e7+ ♔b5 (9...♔c4 10 ♕b4+ ♔d5 11 ♕b5+ ♔d4 12 h7 ♕f1+ 13 ♔g6 ♕g2+ 14 ♗g5 ♕e4+ 15 ♔g7 also wins for White) 10 ♕b4+ ♔c6 11 ♕c4+ ♔b7 12 ♕b5+ ♔c8 (Black tries to avoid White's bishop improving its position with check, but to no avail) 13 ♕c6+ ♔b8 14 ♕b6+ ♔c8 (14...♔a8 15 ♕a5+ ♕xa5+ 16 ♗xa5 ♔b7 17 ♔e4 ♔c6 18 ♔xd3 followed by ♗c3 wins for White) 15 ♗f4 ♔d7 16 ♕c7+ ♔e8 17 ♗g5 ♕f1+ 18 ♔g6 and White wins.

6 hxg7 a1♕ 7 g8♕+ ♔c5 *(D)*



Queen and bishop vs queen is generally drawn, although there are some winning positions when the defender has poorly placed pieces. The addition of an extra pawn for the defender usually doesn't make much difference to the result, but here it operates in the attacker's favour as the pawn prevents Black's king from escaping via d3. White is able to force a win by giving a precise series of checks.

8 ♕c8+ ♔b5

8...♔d5 9 ♕b7+ ♔c4 (9...♔d6 10 ♗b4#) 10 ♕b4+ transposes.

9 ♕b7+ ♔c5

Or 9...♔c4 10 ♔e6! (threatening two different mates in one) 10...♔c5 11 ♕d5+ ♔b6 12 ♗e3+ ♔c7 13 ♕d7+ ♔b8 14 ♗f4+ and White forces mate.

10 ♕b4+ ♔c6

Or 10...♔d5 11 ♕b5+ ♔d6 12 ♗f4+ ♔e7 13 ♕b7+ ♔e8 (13...♔f8 14 ♔g6 ♕g1+ 15 ♗g5

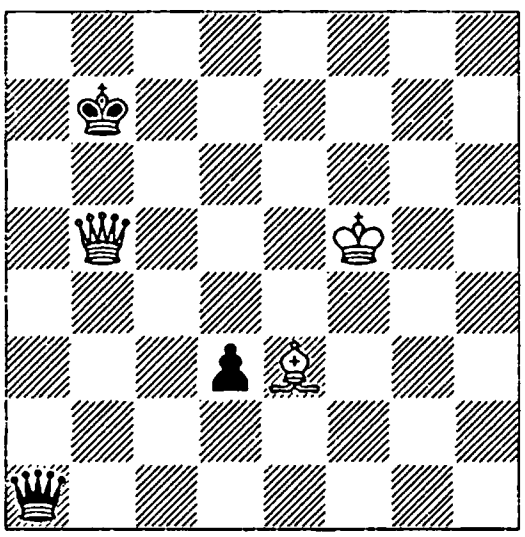
mates) 14 ♕c6+ ♔f8 15 ♗d6+ ♔g8 16 ♕e8+ ♔h7 17 ♕g6+ and White wins.

11 ♕c4+ ♔b6

After 11...♔d6 12 ♗f4+ ♔e7 13 ♕c7+ White wins as in the previous note, while 11...♔d7 12 ♕b5+ ♔c8 13 ♕c6+ ♔b8 14 ♕b6+ ♔c8 15 ♗f4 transposes to the next note.

12 ♗e3+ ♔b7 13 ♕b5+ *(D)*

B



13...♔a8

White also wins after 13...♔c8 14 ♕c6+ ♔b8 15 ♕b6+ ♔c8 (15...♔a8 16 ♕d8+ ♔b7 17 ♕d7+ ♔b8 18 ♗f4+ ♔a8 19 ♕c8+ ♔a7 20 ♗e3+ mates) 16 ♗f4 ♕c3 (16...♔d7 17 ♕c7+ ♔e8 18 ♗g5 and White wins) 17 ♕b8+ ♔d7 18 ♕b7+ ♔e8 19 ♗d6 ♔d8 20 ♗e7+ ♔e8 21 ♗b4! and Black must give up his queen. In line after line we see how the black pawn helps White, either by denying squares to the black king, or by blocking potentially saving queen checks.

14 ♗f4

14 ♕e8+ ♔b7 15 ♕d7+, mating, is slightly quicker.

14...♕a7 15 ♕c6+ ♕b7 16 ♕e8+ ♔a7 17 ♗e3+ 1-0

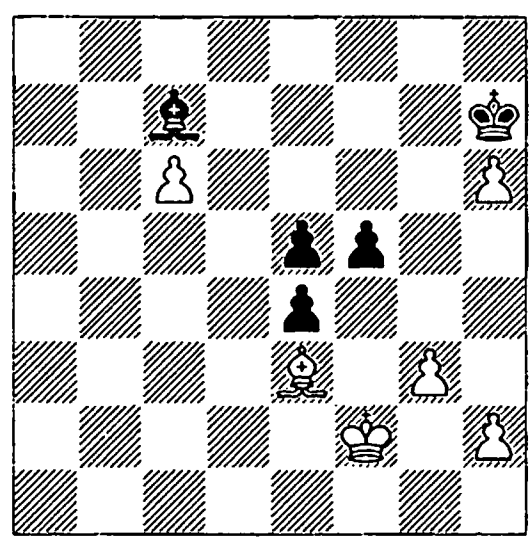
Summary:

- If one side promotes while the other does not, the win may not be guaranteed. A pawn on the seventh rank supported by the bishop and king may prove adequate compensation for the material deficit.
- When both sides promote, whoever has the first check may have a winning position since a queen and bishop constitute a dangerous attacking force against an exposed king.

4.4.8 Surprise Moves

Sometimes there are moves which don't fit any standard pattern and it's here that imagination, the third important quality mentioned in the Introduction, comes into play. In the following position White must realize that it's more important to keep his advanced h-pawn than his bishop.

W



De. Boros – Kosić
Budapest 2006

White is a pawn ahead, but winning this position requires some creativity since Black is threatening to play ...f4. The key point is to recognize that maintaining the h-pawn is crucial, and White must be prepared to take drastic measures if necessary.

1 g4!

This pawn is on its way to support its colleague. Black's reply is forced, since 1...fxg4 2 ♔g3 ♔g6 3 ♔xg4 ♗a5 4 h4 ♗c7 5 h5+ ♔f6 6 ♗g5+ ♔f7 7 ♔f5 is a straightforward win for White.

1...f4 2 g5!

White is prepared to surrender his bishop to consolidate the g- and h-pawns. Since Black's bishop is tied down by the need to cover c7, he will be powerless to prevent White from pushing forward on the kingside.

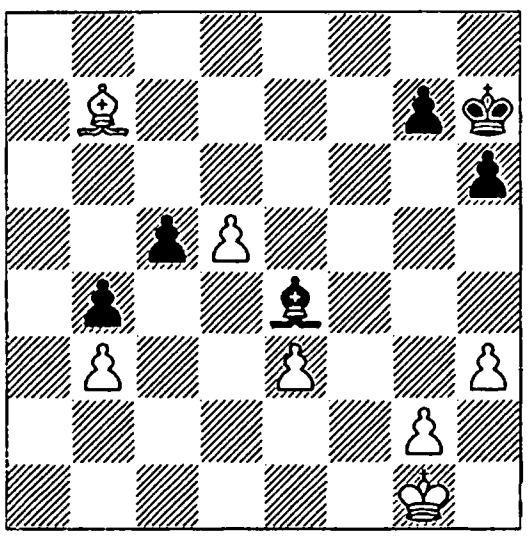
2...fxe3+ 3 ♔xe3 ♔g6 4 ♔xe4 ♗b8 5 h4 ♗c7 6 h5+ ♔h7 7 ♔f5 ♗b8

White's pawns are now so strong that he can afford to move his king away from the e-pawn.

8 ♔f6 e4 9 g6+ ♔xh6 10 g7 1-0

Sometimes the surprise move is not really difficult, but is hard to see because it doesn't seem to fit in with the requirements of the position.

B



Zhang Weida – Lin Ta
China 1989

White is a pawn up, but Black has the possibility of creating a passed b-pawn by playing ...c4. This looks rather dangerous, and Black went on to win the game. Moreover, Lin Ta's notes in *Informator 50* suggested that both sides played accurately and the position is indeed winning for Black. However, as we shall see, it is actually *White* who holds an (admittedly rather small) advantage in the diagram position.

1...c4

White was threatening to win by playing d6, so this move is more or less forced.

2 d6 ♗f5 3 d7?

White panics and gives up his main asset unnecessarily. There was quite a range of options, which we give in increasing order of merit.

1) 3 ♗e4?? ♗xe4 4 d7 cxb3 5 d8♕ b2 will give Black a decisive material advantage.

2) 3 e4?? c3 and the c-pawn promotes.

3) 3 bxc4? b3 4 d7 b2 5 d8♕ b1♕+ followed by ...♕xb7 and Black is a piece up for two pawns and should win.

4) 3 ♗d5?! c3 4 ♔f2 ♔g6 (4...c2?! 5 d7 ♗xd7 6 ♗e4+ is similar to line 5 and is slightly better for White) 5 ♗e4 ♗xe4 6 d7 c2 7 d8♕ c1♕ 8 ♕e8+ ♔f6 9 ♕xe4 ♕b2+ 10 ♔f3 ♕xb3 with a near-certain draw.

5) 3 g4! c3 4 ♔f2!. This is the surprise move; with both sides having pawns close to queening, it hardly seems appropriate to play a quiet king move. The idea is to prevent Black from promoting with check so that ...c2 can be met by the deflection d7. After 4...c2 (there's little choice, because White was threatening to take on f5) 5 d7 ♗xd7 (5...c1♕? 6 d8♕ ♕b2+ 7 ♔f3 ♗c2 8 ♗d5! is very awkward for Black because his own checks amount to little, while White's threat of check on g8 is serious) 6 ♗e4+ ♔g8 7 ♗xc2 ♔f7 White is a pawn up, but it is unlikely he can win as Black can easily blockade the e-pawn with his king, while White will always need to take care of the b3-pawn.

3...♗xd7 4 ♗d5

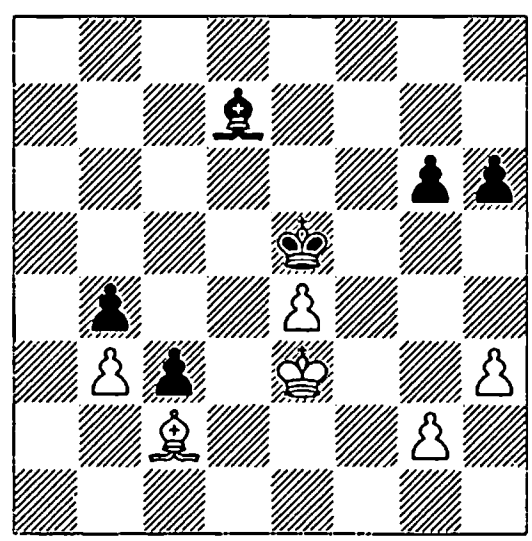
4 ♗e4+ g6 5 bxc4 ♗f5 6 ♗d5 b3 7 c5 b2 is winning for Black.

4...c3 5 ♗e4+ g6 6 ♗c2

The upshot of White's mistake is that material equality has been restored, but with Black having an enormously powerful protected passed pawn on c3. Although Black cannot win immediately (6...♗f5 is met by 7 e4), his advantage is decisive.

6...♔g7 7 ♔f2 ♔f6 8 e4 ♔e5 9 ♔e3 *(D)*

B



White can only play passively and wait to see what Black intends.

9...g5 10 ♗d3

10 g4 loses at once to 10...♗b5, so White cannot prevent Black from advancing his pawn to h4.

10...h5 11 ♗c2 h4 12 ♗d1

Or 12 ♗d3 g4 13 hxg4 ♗xg4 14 ♗c2 ♗h5 and White is in zugzwang as 15 ♔d3 may be met by 15...♗f3!.

12...♗c6

Black starts to head in the wrong direction, although he does not endanger the win. The simplest line is 12...♗e6 13 ♗c2 g4 14 hxg4 ♗xg4 with zugzwang, as in the previous note.

13 ♗c2 ♗b5

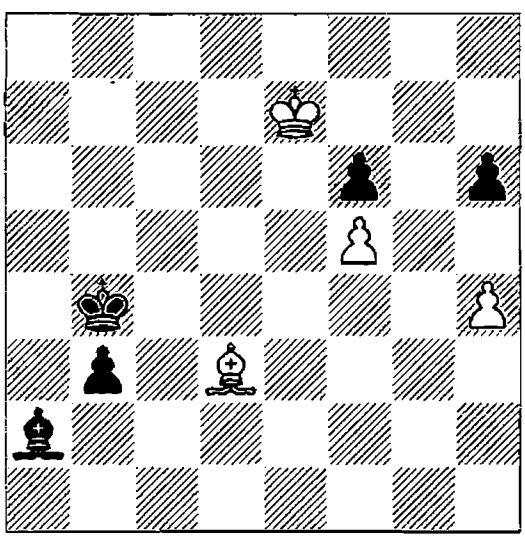
This doesn't achieve much as ...♗f1 can always be met by ♔f2.

14 ♗b1 ♗f1 15 ♔f2 ♗b5 16 ♔e3 ♗e8 17 ♗c2 ♗h5 0-1

Back on the right track. White resigned here because 18 ♔d3 g4! 19 hxg4 (after 19 ♔c4 gxh3 20 gxh3 ♗g4 Black will promote a pawn) 19...♗xg4 20 ♔e3 ♗h5! reaches the zugzwang we have seen before.

The following example is the most surprising of all.

W



Sibriaev – Mololkin
Pardubice 1994

Although this position might appear fairly straightforward, there are quite a few subtleties; indeed, even after considerable analysis I am still not totally sure what the result should be. Black has an extra passed pawn on the queenside, but if White can give up his bishop for this pawn, then his king will probably be able to capture Black's remaining kingside pawns to achieve a draw. The main danger for White, however, is that Black will not allow this and will somehow manage to cut off White's bishop from b1 and make a whole queen. The complexities of this position defeated the players during the game and Mololkin in his *Informator 61* analysis.

1 ♔e6!!

It looks total madness to put the king on a square which allows a discovered check from the bishop, but this is one of White's best moves. Playing ...b2+ isn't as favourable for Black as it might appear, because one of White's problems is the shortage of squares for his bishop along the b1-e4 diagonal. Once Black pushes his pawn to b2, White's bishop gains access to the additional square c2.

1 ♔xf6? loses at once because after 1...♔c3 2 ♗e4 ♔d4 the b-pawn becomes a queen. However, 1 ♗e4 is just as good as the move played since 1...♔c5 (1...♔c3? allows 2 ♗d5, drawing at once) 2 ♔e6!! b2+ 3 ♔xf6 ♔d4 transposes into the note to Black's third move.

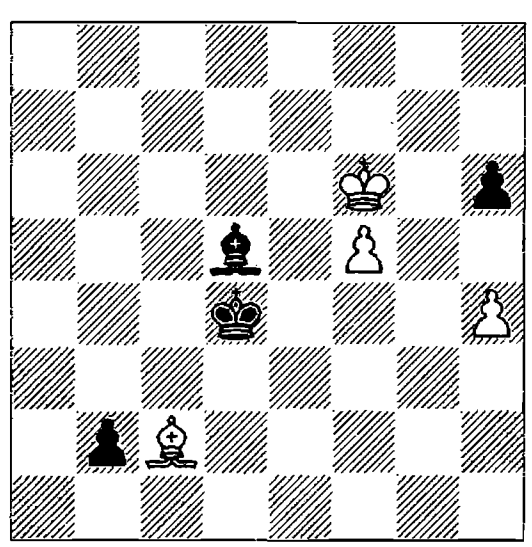
1...♔c3 2 ♗e4 b2+

2...♔d4? 3 ♗d5 is again an immediate draw.

3 ♔xf6 ♗c4?

Objectively speaking, this move is a mistake in that it allows White a forced draw, but it did cause White immediately to make a losing blunder. The strongest continuation wasn't mentioned at all in Mololkin's notes: 3...♔d4! 4 ♗c2 ♗d5! *(D)* (an important finesse; if the bishops are exchanged on e4 rather than d3, Black's king will be one square closer to the f-pawn; thus 4...♗c4 5 ♔g7 ♗d3 6 ♗xd3 ♔xd3 is a draw – see the note to White's fourth move) and now:

W



1) 5 ♗b1? ♗e4 6 ♗a2 ♗c2 7 h5 ♗d3 (White is now in zugzwang and must allow Black's king to e5) 8 ♔g6 (after 8 ♔e6 ♗c4+ Black wins at once) 8...♔e5 9 ♔xh6 ♔f6 10 ♔h7 ♗xf5+ with a further branch:

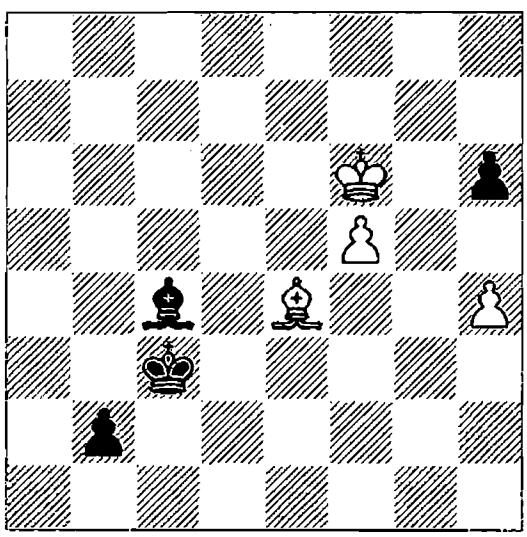
1a) 11 ♔h8 ♗d3 is zugzwang: 12 h6 ♔g6 13 h7 ♔h6 14 ♔g8 ♗xh7+ 15 ♔f7 ♔g5 16 ♔e7 ♔f4 and Black wins by playing the king to c1.

1b) 11 ♔h6 ♗e4 12 ♗b1! ♔e5! 13 ♗a2 ♗d5 14 ♗b1 ♗f3 15 ♔g5 (15 ♗a2 ♔d4 16 ♔g5 ♗e4 transposes) 15...♗e4 16 ♗a2 ♔d4 17 h6 ♔c3 18 ♔f6 ♔b4 19 ♔g7 ♔a3 and Black wins by one tempo.

2) 5 ♔g7! ♗e4 6 f6 (6 ♗xe4? ♔xe4 7 f6 b1♕ 8 f7 ♕a1+ 9 ♔g8 ♕g1+ 10 ♔h7 ♕f2 11 ♔g7 h5 12 f8♕ ♕xf8+ 13 ♔xf8 ♔f4 wins for Black) 6...♗xc2 7 f7 b1♕ 8 f8♕ ♕g1+ 9 ♔h8 ♕g6 and although Black is a piece ahead I am not sure whether this position is winning since it's not easy to avoid perpetual check while at the same time defending the vulnerable h6-pawn. One possible line is 10 ♕b4+ ♔d3 11 ♕e7 ♔d2 12 h5! ♕xh5 (now the position is a draw according to the 6-man tablebases) 13 ♕d6+ ♗d3 14 ♕b4+ ♔e3 15 ♕b6+ ♔e2 16 ♕b2+ ♔f3 17 ♕f6+ and Black cannot evade the checks without losing the h6-pawn.

We now return to 3...♗c4? *(D)*:

W



4 ♗b1?

White fails to take advantage of Black's mistake and makes a losing blunder just when he could have forced a draw. 4 ♔g7! would have saved the game because Black's king is too far away after the exchange of bishops on d3: 4...♗d3 5 ♗xd3 ♔xd3 6 f6 b1♕ 7 f7 (Black cannot force White's king in front of the pawn as g5 is under White's control) 7...♕b2+ 8 ♔g8 ♕b3 9 ♔g7 ♕c3+ 10 ♔g8 ♕c4 11 ♔g7 ♕d4+ 12 ♔g8 ♕d5 13 ♔g7 ♕e5+ 14 ♔g8 ♕e6 15 ♔g7 ♕e7 16 ♔g8 ♔e4 (16...♕xh4 17 f8♕ should be a comfortable draw as the rook's pawn is the least favourable pawn to have in an ending of ♕+♙ vs ♕ and here it is only on the third rank) 17 f8♕ ♕xf8+ 18 ♔xf8 ♔f5 19 ♔e7! (not 19 ♔g7?, losing to 19...h5) 19...♔g4 20 ♔f6 ♔xh4 (or 20...h5 21 ♔e5 ♔xh4 22 ♔f4) 21 ♔f5 and the game is saved.

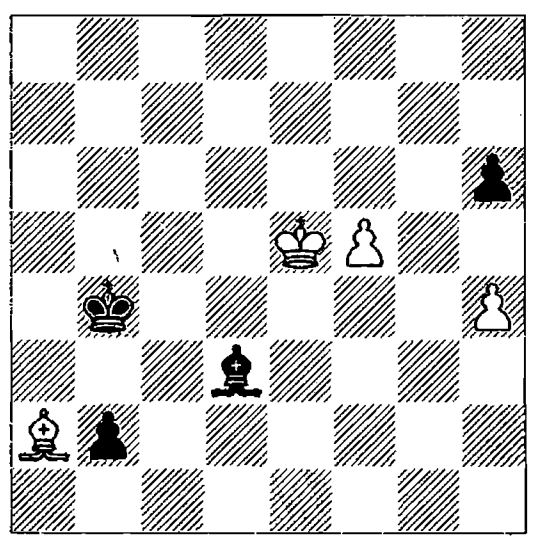
4...♗d3 5 ♗a2 ♔b4!

Black can also win by 5...♔d4 as in the analysis of 5 ♗b1? above, but with his king so close to the queenside it is even simpler just to play the king to a3.

6 ♔e5 *(D)*

6 ♔g7 isn't possible here as Black just takes the pawn on f5.

B



6...♔a3 7 f6 ♔xa2 8 f7 b1♕ 9 f8♕ ♕e1+ 10 ♔d5

After 10 ♔f6 Black exchanges queens and plays ...h5; his bishop is the correct colour for the rook's pawn, so he wins.

10...♕e4+ 11 ♔c5 ♕f5+ 0-1

Summary:

- Always be on the alert for unexpected moves. In bishop endings, surprise moves are often connected to promotion possibilities or to bishop sacrifices.

5 Opposite-Coloured Bishop Endings

5.1 Introduction

Opposite-coloured bishop endings are quite unlike any other type of ending. In other endings of x + pawn vs x, where x is any piece, the attacker has at least some winning chances, but this ending is always a draw if the pieces are opposite-coloured bishops, except if the pawn can promote immediately. Indeed, even bishop + two pawns vs bishop is very often a draw, for example if the pawns are connected and not far advanced.

Here's a summary of the main distinctive points of opposite-coloured bishops:

- The number of pawns one has is often less important than the number of passed pawns.
- The defender's best chance is often to set up a blockade by putting his pawns on the same-coloured squares as his bishop. This is the only type of ending in which a 'bad' bishop may actually be better than a 'good' bishop (but note that this only applies to the **defender**).
- Pawn moves often have far-reaching consequences.
- Playing opposite-coloured bishop endings often depends more on logic than on the analysis of variations.

Our first section, 5.2 (see this page), focuses on the last of these points. Playing opposite-coloured bishop endings often requires an unusual type of chess thinking, in which logic plays more of a role than the analysis of variations. In extreme cases, positions may be more like mathematical puzzles than chess. This novel type of thinking is not hard to master, provided one sees some examples demonstrating its effectiveness.

In Section 5.3 (page 240), we return to a topic which has appeared a number of times earlier in the book: the breakthrough. This is especially important in opposite-coloured bishop positions, because it can be hard to win positions with two or even three extra pawns if you have no passed pawns. Often the only way to make progress is to sacrifice material in a breakthrough in order to create passed pawns.

One tricky ending is that of ♗+2♙ vs ♗ with two disconnected pawns, since it may not be easy to tell whether a particular position is winning. Zugzwang plays a large role in such endings, which can be surprisingly subtle. In Section 5.4 (page 245), we look at a variety of positions in which one side has disconnected passed pawns and see how easy it is to misplay such positions.

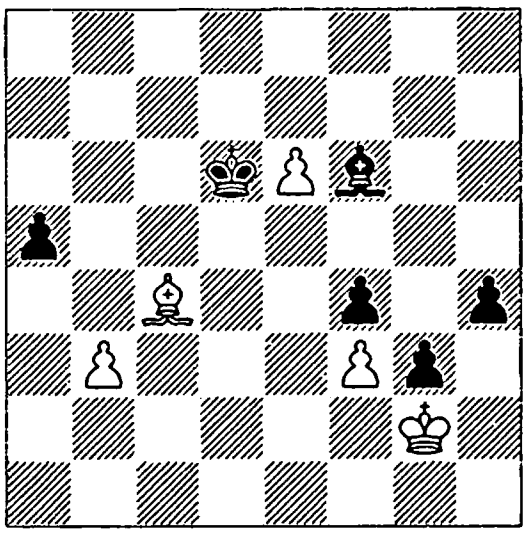
In Section 5.5 (page 249) we move on to zugzwang, which often arises in opposite-coloured bishop endings.

5.2 Logical Thinking

The following two examples demonstrate how logical reasoning is often more important than the analysis of concrete variations. It is for this reason that computers often play opposite-coloured bishop endings relatively weakly.

Opposite-coloured bishops are deceptive, because many of the usual chess rules don't apply; indeed, it may be necessary to do the exact opposite of what normal chess intuition suggests. In the diagram overleaf White is a pawn down and Black has two connected passed pawns, but these pawns are at the moment firmly blockaded by White's king. Indeed, at first glance it's hard to see how White can lose. If Black attacks the b3-pawn with his king, it is true that White cannot defend the pawn with his bishop on c4, as this allows ...a4, but White can keep his bishop on d5. If Black then passes, White simply oscillates with his king between g2 and h3.

W



Skachkov – R. Scherbakov
Russia Cup, Ekaterinburg 1997

There is only one other plan Black can adopt: he can play his king to e3, when White must put his own king on g2, and then strike with ...h3+. If White has to play ♔xh3, then ...♔f2 followed by ...g2 wins. Suddenly, the pendulum swings the other way: what can White do to stop this plan? It is apparent that the only possibility is to have his bishop controlling h3. Let's for the moment suppose that Black's bishop is on e7, blocking White's pawn. Then when Black plays ...♔e3, White must be ready with his bishop on f5 and his king on g2. Suppose Black then attacks the b3-pawn with ...♔d4-c3? In this case White is just in time with ♗e4-d5.

However, this defence all looks rather fragile and it doesn't take long to discover the weak spot. Let's suppose that Black's king is on c3 and White's bishop and king are on d5 and g2 respectively. Black then continues ...♔d3, forcing ♗e4+, and then ...♔d4. Now there's a problem. If the bishop moves along the e4-a8 diagonal, Black plays ...♔e3 and then ...h3+, while if the bishop moves on the other diagonal then ...♔c3 wins because the b3-pawn cannot be satisfactorily defended. A king move also loses to ...♔e3. This zugzwang position can't be avoided because the sequence given above actually forces it. Can we conclude that White is lost? Having penetrated two layers deep into the puzzle of this position, we can now move to the final layer. All these problems arise because the e6-pawn blocks White's bishop, and prevents it from covering b3 and h3 at the same time by occupying e6. It follows that White draws precisely if he can play e7, getting rid of the obstructing pawn. It's White to move, so he can reach a draw.

1 ♔h3?

Unfortunately, White didn't see it and made a fatal mistake. 1 e7! ♗xe7 2 ♗g8 ♔e5 3 ♗f7 ♔d4 4 ♗g8 ♔e3 5 ♗e6 is a simple draw.

1...♗e7!

Black at once seizes on White's mistake and doesn't give him a chance to rectify his error.

2 ♗d3

2 ♔g2 ♔c5 (threatening ...a4) 3 ♗e2 ♔b4 4 ♗d1 ♔c3 and Black wins at once since White cannot allow ...♔d2 trapping the bishop.

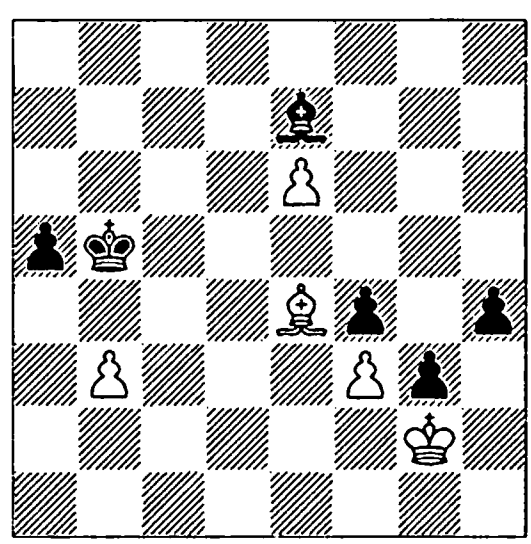
2...♔c5 3 ♗e4 ♔b5

Black wastes time but doesn't endanger the win. The quickest route to victory was 3...♔b4 4 ♗d5 ♔c3 5 ♔g2 (there is no other move) 5...♔d3 6 ♗e4+ ♔d4! with the zugzwang mentioned above.

4 ♔g2?! *(D)*

4 ♗a8 ♔b4 5 ♗d5 would have forced Black to find the win given in the previous note.

B



4...♔b4

Now it's even easier.

5 ♗d5 ♔c3

White is already in zugzwang since he can only move his king, giving Black an extra tempo when he moves his king to e3.

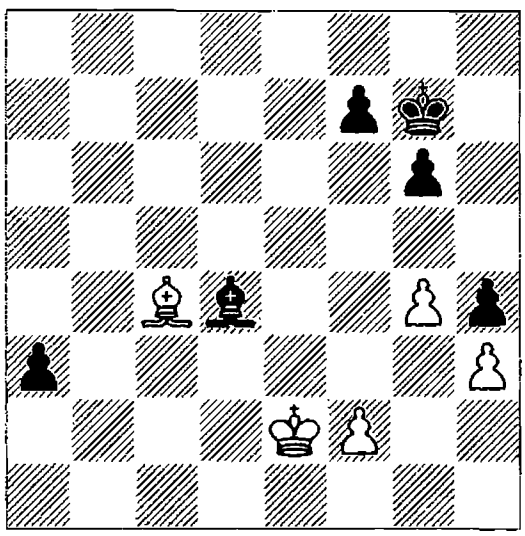
6 ♔h3 ♔d4 7 ♗c6

7 ♗e4 ♔e3 8 ♔g2 h3+ is the same.

7...♔e3 8 ♔g2 h3+ 9 ♔g1 h2+ 10 ♔g2 h1♕+ 11 ♔xh1 ♔f2 0-1

The next example of logical thinking again shows how deceptive opposite-coloured bishop positions can be.

B



Tringov – Smyslov
Reykjavik 1974

This ending is interesting because Minev analysed it in *Informator 17* and Smyslov himself included it in his book *Die Kunst des Endspiels* (Bock & Kübler, 1996). Both Minev and Smyslov considered the position to be winning for Black, although it is a draw. The analysis is especially instructive because it is typical for opposite-coloured bishop endings. There is no other type of ending in which logical thinking is more important. Very often it is not the specific moves that matter in opposite-coloured bishop endings, but the way in which the players arrange their pieces and pawns. Usually the defender will try to establish a fortress and will have plenty of time to arrange his pieces however he likes. The question then is whether his fortress is impenetrable or can be broken into by the correct attacking plan. Even grandmasters often have trouble distinguishing between these two cases. In the diagram White is just one pawn down, but it is a far-advanced outside passed pawn. White's problem is that Black has two attacking plans: he can try to play his king to b2 to win the bishop, or he can try to penetrate with his king on the kingside. It is not easy to counter both plans.

1...f5!

The best move; the f7-pawn is poorly placed, because White can attack it with his bishop while keeping the a-pawn under control. Black moves the pawn to a better square since other lines offer fewer chances, for example, after 1...♔f6 2 f4 ♔e7 3 g5 f6 4 gxf6+ ♗xf6 5 ♔d3 ♔d6 (5...♗g7 6 ♗a2 ♗h6 7 ♔e4 ♔d6 8 f5 is also a draw) 6 ♗a2 ♔c5 7 ♗f7 White draws easily, as Black always has to watch out for ♔c2-b1 and ♗xg6.

2 gxf5

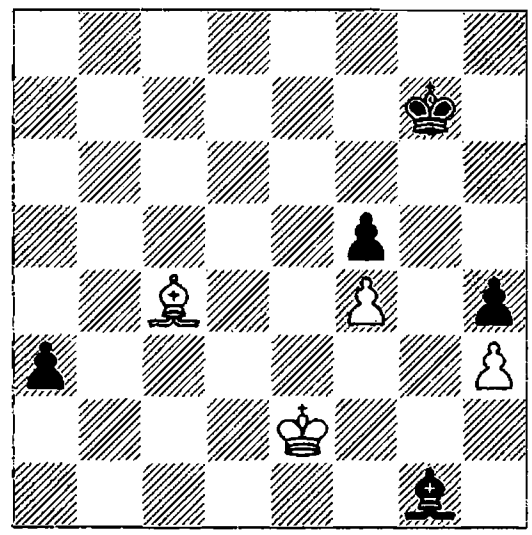
After 2 g5? White's kingside pawns get stuck on dark squares and Black wins by 2...♗c5 3 f4 ♔f8 4 ♔d3 ♗d6 5 ♔e3 ♔e7 6 ♗d5 ♔d7 and the king is heading to b2.

2...gxf5

White now went wrong and handed Black an easy win.

3 f4? ♗g1! *(D)*

W



Transferring the bishop to h2 ties the white king down to the defence of the f4-pawn, leaving the black king free to head for b2, after which White loses his bishop.

4 ♔d3 ♗h2 5 ♔e3 ♔f6 6 ♗a2 ♔e7 7 ♗g8 ♔d6 8 ♗f7 ♔c5 9 ♗a2 ♔b4 10 ♔d4

White must surrender the f4-pawn, as 10 ♗e6 loses at once to 10...♔c3.

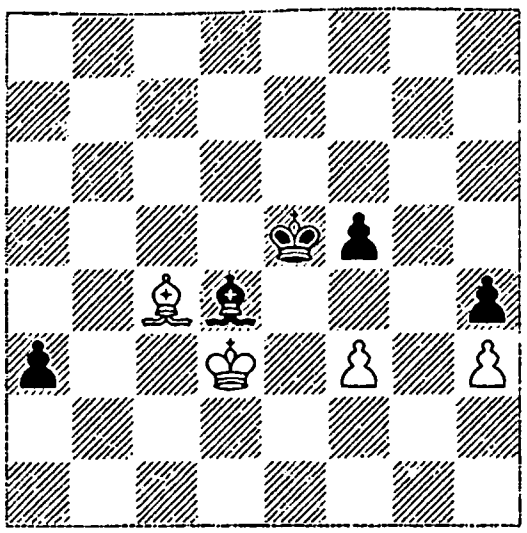
10...♗xf4 11 ♔d5 ♗g3 12 ♔d4 f4 0-1

White resigned as the white king will be forced to move either straight away or after ...f3-f2, allowing the black king to reach b2 and win White's bishop.

However, if we return to the critical position after 2...gxf5, White has a much better defence.

3 f3! ♔f6 4 ♔d3 ♔e5 *(D)*

W



In this critical position, Minev gave 5 f4+? ♔xf4 6 ♔xd4 ♔g3, while Smyslov's analysis ran 5 ♔c2? ♔f4 6 ♗e6 ♔xf3 7 ♔b3 f4 8 ♔xa3 ♔g3, both of which are winning for Black.

In order to find the correct defence, we have to think about the logic of the position. The key point arises in Smyslov's line 5 ♔c2 ♔f4 6 ♗e6 ♔xf3. If White could take on f5 he would draw, but he cannot because ...a2 promotes the pawn. However, the pawn promotes only because of the position of the black bishop on d4. If it is on a7 or g1, or even on b2 or a1, then Black no longer wins in this line because White can safely take on f5. Thus the bishop is optimally placed on d4 and any move by it only weakens Black's position. Therefore we have the solution: White only has to wait. Black must move his bishop in order to threaten ...♔f4 and then White can safely reply ♔c2.

5 ♗b3! ♗g1

5...♗b2 6 ♔c2 is the same, while giving up the bishop by 5...♔f4!? 6 ♔xd4 ♔xf3 doesn't work due to 7 ♗d5+! ♔g3 8 ♔e3 f4+ 9 ♔e2 ♔xh3 10 ♔f3 and the black king cannot escape from the h-file.

6 ♔c3 ♔f4 7 ♗e6!

Curiously, Minev gave this line but only considered 7 ♗d5? here.

After 7 ♗e6! the position is a draw, as Black can only take the f3-pawn at the cost of his own f5-pawn. If he plays ...♔e5 and ...f4, then White just plays his bishop to g4, defending both pawns.

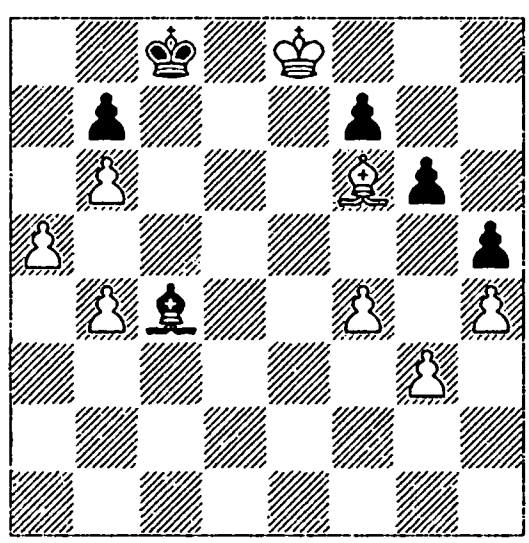
Summary:

- Opposite-coloured bishop positions often depend on logical thinking rather than the concrete analysis of variations.
- The defender's best plan is often to set up a blockade and wait to see if the attacker can break it down.
- Sometimes pawns only get in the way and it is necessary for the defender to jettison such obstructive pawns as soon as possible.

5.3 Breakthrough

In opposite-coloured bishop endings, the defender's main strategy is often to set up a fortress. If the fortress is impenetrable, then he will probably be able to draw. However, the attacker has an important weapon against a blockade: the breakthrough. By sacrificing one or more pawns, he may be able to create a passed pawn that proves too much for the defender, especially if he already has another passed pawn in a different part of the board. Establishing whether a breakthrough really works can be quite complicated, and this is a frequent source of errors.

B



Bradvarević – R. Marić
Yugoslavia 1971

In this position, the possibility of a breakthrough is critical. White is two pawns up on the queenside, but he cannot make progress directly, as Black can easily stop the a-pawn. White must try to combine the pressure on the

queenside with a sacrificial breakthrough on the kingside so as to obtain a passed pawn there. It turns out that this is insufficient to win against accurate defence, but it certainly poses awkward problems for Black over the board.

1...♔b8!

It is essential for Black to play his king to a8, since otherwise White plays ♗e5, cutting the king off from a8 permanently and thus increasing the threat posed by the advance of White's a-pawn. Thus 1...♗b3? is wrong and loses to 2 ♗e5 ♗c4 3 ♗c7 ♗e6 4 ♔e7 ♗c4 5 g4! hxg4 6 f5 ♗e2 (White also wins after 6...gxf5 7 h5 f4 8 h6 ♗d3 9 ♗xf4 ♗e4 10 b5 ♗d3 11 a6 and 6...♗b3 7 f6 ♗d5 8 b5 ♗b3 9 a6) 7 ♔xf7 gxf5 8 h5 f4 9 h6 ♗d3 10 ♗xf4 followed by b5 and a6, when one pawn will promote.

2 ♔d8 ♔a8

The danger posed by the a-pawn is much less now that Black's king can blockade it. However, White can still try to create a passed pawn on the kingside.

3 ♗e5 ♗d3 4 ♔e7 ♗c4 5 ♔f6

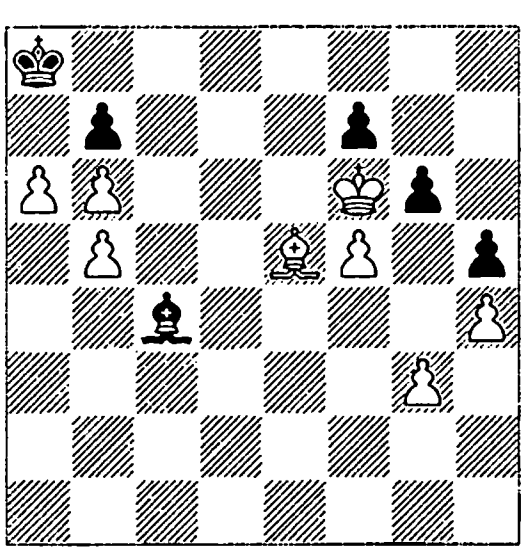
5 g4 hxg4 6 f5 doesn't threaten anything so Black can wait by 6...♗b3.

5...♗e6 6 ♗d6 ♗c4 7 b5 ♗b3 8 a6 ♗e6 9 ♗e5 ♗c4

Everything is as well placed as it can be, so now White makes his move.

10 f5! *(D)*

B



10...♗xb5?

Black immediately goes wrong. 10...bxa6? is also bad due to 11 fxg6 fxg6 12 ♔xg6 ♗xb5 13 ♔xh5 ♔b7 14 ♗d4 a5 15 g4 and the kingside pawns are too strong. However, as Marić pointed out in *Informator 11*, 10...♗d3! would have drawn, since neither 11 fxg6 fxg6 nor 11 g4 hxg4 offers White any winning chances.

11 g4!

This surprising move is decisive. 11 fxg6? fxg6 12 ♔xg6 ♗e2 is only a draw.

11...hxg4

There is nothing better, since White always obtains a passed pawn; for example, 11...♗d3 12 ♔xf7 gxf5 13 gxh5 or 11...♗c4 12 fxg6 fxg6 13 ♔xg6 hxg4 14 axb7+ ♔xb7 15 ♗d4.

12 ♔xf7 gxf5 13 ♗f4!

Accuracy is essential. 13 h5? is only a draw after 13...f4! 14 ♗xf4 (14 h6 ♗d3 is also drawn) 14...bxa6 15 h6 ♗d3 16 ♔g7 a5.

13...g3

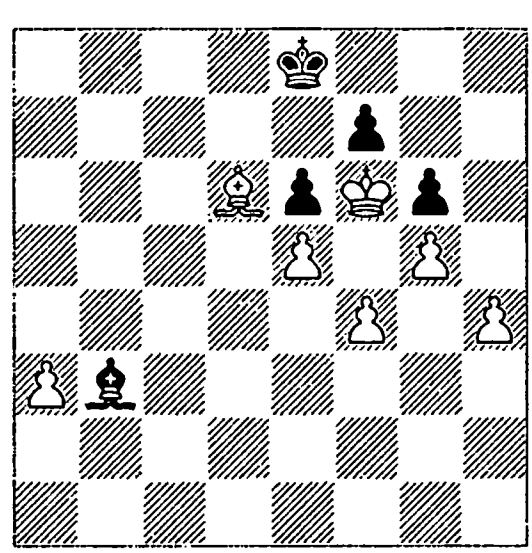
Or 13...bxa6 14 h5 g3 15 h6 g2 16 ♗h2 and the h-pawn promotes.

14 h5 g2 15 ♗h2 f4 16 h6 ♗d3 17 axb7+ ♔xb7 18 ♗g1! 1-0

White wins the bishop for the h-pawn and then brings his king back to finish the game off.

In the next position, one of the world's leading players missed a chance for a decisive breakthrough.

W



Gelfand – Shirov
Bazna 2009

White already has one passed pawn on the queenside and can create another on the kingside. This suggests two possible plans for White. The first involves deflecting Black's bishop by giving up the a-pawn, after which White obtains

two passed pawns on the kingside. In the second, White executes the kingside breakthrough while keeping his a-pawn, thus creating two passed pawns on opposite sides of the board, but at the cost of giving away several pawns. One argument in favour of the first plan is that giving away the a-pawn is no great sacrifice, as it is part of a rook's pawn plus wrong bishop combination, and it may be this that swayed Gelfand in favour of it. However, there is no substitute for precise calculation, and this shows that it is the second plan which leads to success.

1 a4?

The winning line was 1 f5! exf5 2 e6! ♗xe6 (2...f4 3 exf7+ ♗xf7 4 ♗xf4 ♔f8 5 a4 and 2...fxe6 3 ♔xg6 ♔d7 4 ♗e5 are easily winning for White) 3 h5 gxh5 4 g6 (three pawns have bravely given themselves up so that the g-pawn can advance and now Black must surrender his bishop, since otherwise White promotes straight away) 4...fxg6 5 ♔xe6 ♔d8 6 ♔d5 (White is just in time to head off Black's king and prevent it from reaching a8) 6...♔c8 7 ♔c6 g5 8 a4 h4 9 a5 h3 10 a6 h2 11 ♗xh2 f4 12 a7 and White wins by one tempo.

1...♗xa4 2 f5 ♗c2!

Just because White has put a pawn *en prise* doesn't mean that Black has to take it. 2...exf5? is wrong due to 3 e6 ♗b3 (or 3...fxe6 4 ♔xg6 f4 5 ♗xf4 ♔f8 6 ♔f6 and White's pawns are unstoppable) 4 exf7+ ♗xf7 5 ♔g7 f4 6 ♗xf4 ♔e7 7 ♗d6+ ♔e6 (7...♔e8 8 ♗c5 is also zugzwang) 8 ♔f8 and Black is in a fatal zugzwang.

3 fxe6

3 h5 gxh5 4 g6 fxg6 5 fxg6 h4 6 g7 ♗h7 is an easy draw.

3...fxe6 4 ♔xe6 *(D)*

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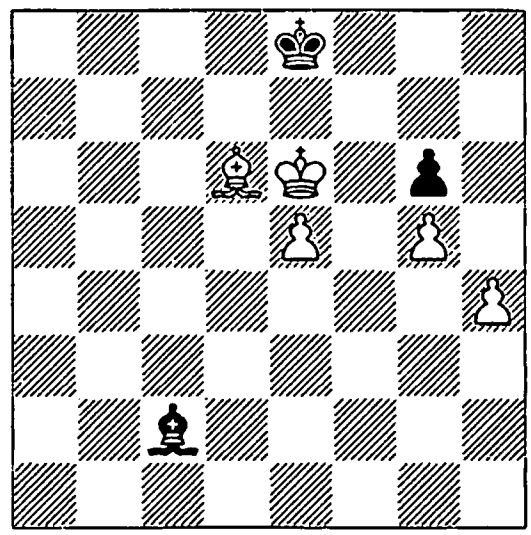


Here the two extra pawns are not enough to win.

4...♗b3+ 5 ♔f6 ♗c2 6 e6 ♗d3 7 ♗g3 ♗c2 8 h5

White tries his best but it is not enough because the two passed pawns are too close together.

8...gxh5 9 g6 ♗d3 10 ♗h4 ♔f8 11 e7+ ♔e8 12 ♔g7 ♗c2 13 ♔h6 ♗b3!

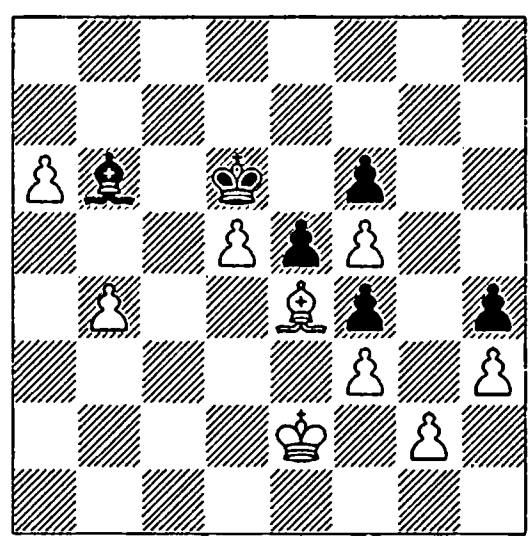
The only move, preparing to meet g7 by ...♗g8.

14 ♔xh5 ½-½

White can make no further progress; for example, 14...♗c4 15 ♔h6 ♗b3 16 ♔g7 ♗c2! (the only move, since otherwise ♔h8 followed by g7 wins) 17 ♔h7 ♗d3 18 ♔h6 ♗c4! 19 g7 ♗g8 20 ♔g6 ♔d7.

In exceptional cases, it may be necessary to offer a number of pawns in order to achieve the desired breakthrough.

W



Vera – Abreu
Santa Clara 2000

This ending demonstrates several instructive points relating to opposite-coloured bishop positions. White has a large material advantage of three pawns, but Black appears to have a perfect blockade on the dark squares. Trying to support the queenside pawns with the king doesn't lead to success for White, since after 1 ♔d3 ♗d4 2 ♔c4 ♗e3 3 ♔b5 ♗d4 4 ♔a5 ♗a7 5 b5 ♔c5 6 d6, Black plays 6...♗b6+ and only then ...♔xd6,

with an easy draw. At first it is hard to see any other plan for White, but in the game he found an imaginative idea involving the sacrifice of two pawns.

1 g3!!

The position is very complicated, but although Black could have put up more resistance, I don't see an adequate defence for Black. The basic idea behind the sacrifice is eventually to create a passed h-pawn. Black's pieces can cope with the three queenside passed pawns because they are all close together, but the addition of a passed h-pawn will overstretch Black's pieces. Widely separated passed pawns are a powerful force in opposite-coloured bishop endings, and here it is worth considerable material in order to create them. The use of a sacrificial breakthrough is a typical ploy in opposite-coloured bishop endings, since it is often not the number of pawns which is important but the number of passed pawns.

1...fxg3

After 1...hxg3? 2 ♔f1 Black loses without a fight, as there is no way that he can stop all four passed pawns.

2 f4!

This is the logical consequence of the previous move: a further sacrifice opens a path for the white king to approach the h4-pawn, while White's bishop can hold up Black's passed pawns along the long diagonal.

2...exf4 3 ♔f3 ♔e5

The best move, preventing ♔g4 for the moment. After 3...♗e3? 4 ♔g4 ♔e5 5 ♗f3 ♗f2 6 b5 Black is in zugzwang; if he moves his bishop along the g1-a7 diagonal, White can safely take on h4, while if he moves his king, White plays ♔xf4, followed by ♗g2 and ♔g4, again taking aim at the weak black h-pawn.

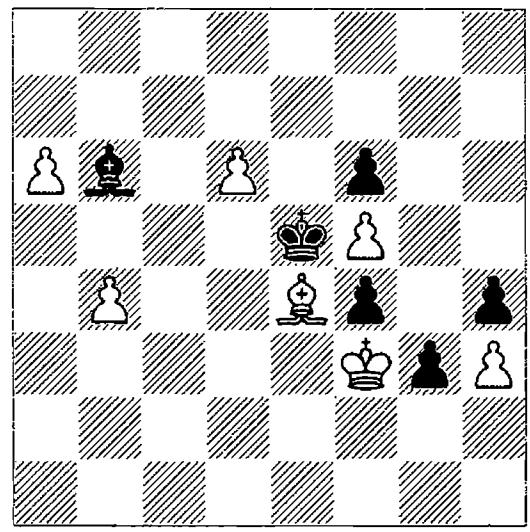
4 d6! *(D)*

White decides to use his d-pawn to deflect the black king and thereby free his own king to move to g4. It's the only way to make progress, but it does cost White an important pawn. Black now has two options: he can either take on d6 immediately, or he can first play ...g2.

4...♔xd6

The alternative is 4...g2 5 ♔xg2 ♔xd6 (not 5...♔xe4? 6 d7 and White wins at once). The

B



idea here is to get rid of the g-pawn at once, when the logic is somewhat similar to that in the game, except that here Black still has his f-pawn. In some lines this is an advantage, but in others it is a handicap, as it prevents Black from controlling h6 (and thus holding up the h-pawn) by placing his bishop on e3. After 6 ♔f3 *(D)* Black can try:

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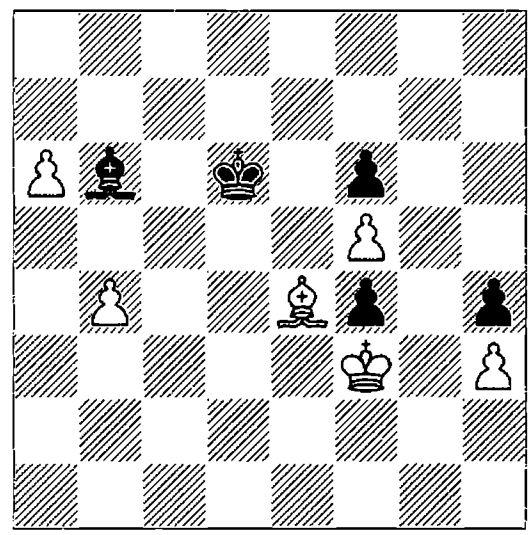
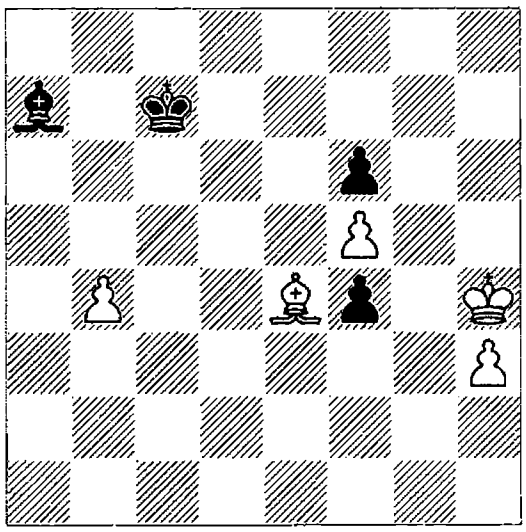


1) 6...♔e5 7 ♗d3 ♔d4 (7...♗e3 8 ♔g4 ♗f2 9 a7 ♗xa7 10 ♔xh4 ♔d6 11 ♔h5 is similar) 8 ♗e2 ♔e5 9 ♔g4 ♗f2 10 ♗d3 (now that Black's bishop is on f2, he cannot play the disturbing ...♔d4) 10...♔d6 11 a7 ♗xa7 12 ♔xh4 ♔e7 13 ♔h5 ♔f7 14 ♔h6 ♗f2 15 ♗e4 followed by b5 and Black ends up in zugzwang as in line 2b.

2) 6...♔c7 7 ♔g4 (7 ♔xf4 ♗f2 8 ♔g4 ♔b6 is the clear draw mentioned above) 7...♗f2 8 a7 ♗xa7 9 ♔xh4 *(D)*.

This is the crucial position and now Black has to decide how to stop the h-pawn. If he

B



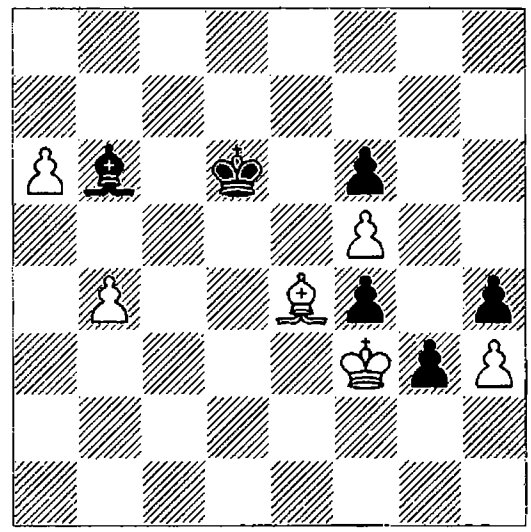
plays ...f3, then he can stop it by playing his bishop to the c1-h6 diagonal, since after ♔g4 and h4-h5 White cannot advance his h-pawn any further. However, White can play his king to e4, hoping to penetrate via d5 and e6. We may assume that White's b-pawn is on b5 by this point. Then Black's king can be on c5, preventing ♔d5 and holding back the b-pawn. Now, however, White plays b6, deflecting the king and forcing White's own king through to d5 and e6. White then plays his king to g7 (carefully avoiding taking the f6-pawn along the way) and wins the black bishop for the h-pawn. It is this type of general thinking which is characteristic of opposite-coloured bishop positions; the concrete moves are often less important than the planning. It follows that playing to stop the h-pawn with the bishop is doomed to failure. Here's the concrete analysis:

2a) 9...f3 10 ♗xf3 ♗e3 11 ♔g4 ♔b6 12 ♗e2 ♗d2 (or 12...♔c7 13 b5 ♔d6 14 h4 ♗d2 15 ♔f3 ♔d5 16 h5 with a very similar position) 13 b5 ♔c5 14 h4 ♗e1 15 h5 ♗d2 16 ♔f3 ♔d5 17 ♗c4+! ♔c5 18 ♔e4 ♗g5 19 ♗e2 ♗h6 20 b6! ♔xb6 21 ♔d5 ♔c7 22 ♔e6 ♗g5 23 ♔f7, followed by ♔g7 and h6, winning the bishop.

2b) 9...♔d6 10 ♔g4 ♗e3 (Black holds on to the f-pawn, but this can cause problems) 11 ♗f3! ♔e7 12 ♔h5 ♔f7 13 ♔h6 ♗f2 14 b5 (Black is now in zugzwang, and must either allow one of the pawns to advance, or let White's king occupy g6) 14...♔f8 (14...♗c5 15 h4 ♗e3 16 ♔h7, followed by h5-h6 and ♗d5+, is also a win) 15 ♔g6 ♔e7 16 ♔g7 (another zugzwang) 16...♗h4 17 b6 ♔d7 18 b7 ♔c7 19 ♔g6 followed by ♔h5, releasing the h-pawn and winning.

After the move played, 4...♔xd6 *(D)*, it's time to look at the logic of the position.

W

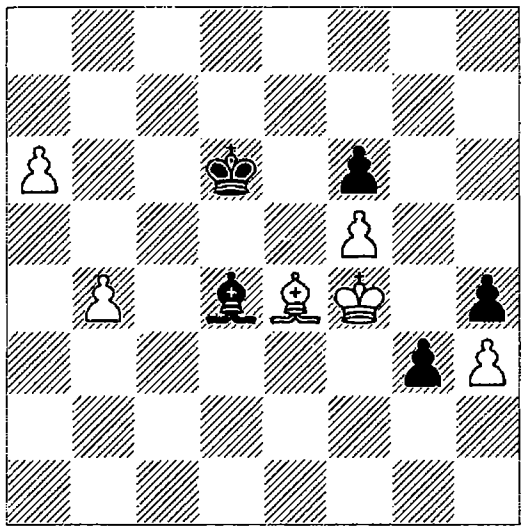


If White can take the h4-pawn without making any concessions then he will win, as the passed h-pawn will be too strong. Therefore Black must defend the h4-pawn by ...♗f2, and he must beware of White's threat to play ♔xf4 followed by ♗g2, which nullifies this defence. Assuming Black can get rid of the g-pawn and play his king to b6, then the draw is clear, because Black can defend the kingside pawns by ...♗d4 or ...♗f2 as appropriate, when it is impossible for White to make progress. In fact, Black doesn't have time to arrange this ideal set-up since he can get his bishop to f2, but has no time for ...♔b6 as well. This means that White has a chance to play a7, deflecting the bishop, and then to play ♔xh4. But now White's assets on the queenside are reduced to a single pawn and this gives Black further drawing possibilities. However, by exploiting zugzwang it appears that White can always penetrate with his king, although he may need to offer his last queenside pawn to achieve this. In this line, White offers a total of four pawns in the course of the play, which must surely be some sort of record for a real-life example.

5 ♔xf4 ♗d4 *(D)*

After this White can play ♗g2, when Black cannot defend the h4-pawn with his bishop. However, even after 5...g2 6 ♗xg2 ♔c7 White

wins because Black is one tempo short of setting up a drawing position: 7 ♔g4 ♗f2 8 a7! (otherwise ...♔b6 draws) 8...♗xa7 9 ♔xh4 ♗f2+ (or 9...♔d6 10 ♔g4 ♗e3 11 h4 ♔e7 12 b5 ♔f7 13 ♗d5+ ♔g7 14 ♗c6 ♔f7 15 ♔f3 ♗g1 16 h5 ♔g7 17 ♗e8 ♔h6 18 ♔e4 ♔g5 19 ♗g6 followed by ♔d5) 10 ♔g4 ♔b6 11 ♗f1 ♗e1 12 b5 ♔c5 13 h4 ♔b6 14 h5 ♗d2 15 ♔f3 ♔c5 16 ♔e4 ♗g5 17 b6 ♔xb6 18 ♔d5 and White penetrates to g7.



6 ♗g2!

Now the h-pawn is doomed and White secures a kingside passed pawn.

6...♗f2

6...♔c7 7 ♔g4 ♔b6 8 ♔xh4 ♔xa6 9 ♔h5 and White wins.

7 ♔g4 ♔e5 8 b5 ♗d4 9 ♔xh4 ♔f4

9...♔xf5 10 ♔xg3 is also decisive.

10 ♔h5 ♔xf5

In this line Black wins the f5-pawn, but it makes no difference.

11 h4 ♔f4 12 ♔g6 ♔g4 13 h5 f5 14 b6 ♗xb6 15 h6 f4 16 h7 f3 17 h8♕ fxg2 18 ♕c8+

18 ♕f6!, threatening mate in two, wins at once.

18...♔f3 19 ♕b7+ ♔f2 20 ♕xb6+ ♔f1 21 a7 g1♕ 22 ♕xg1+ ♔xg1 23 a8♕ g2 24 ♕f3 ♔h2 25 ♕f2 ♔h1 26 ♕h4+ ♔g1 27 ♔f5 1-0

Summary:

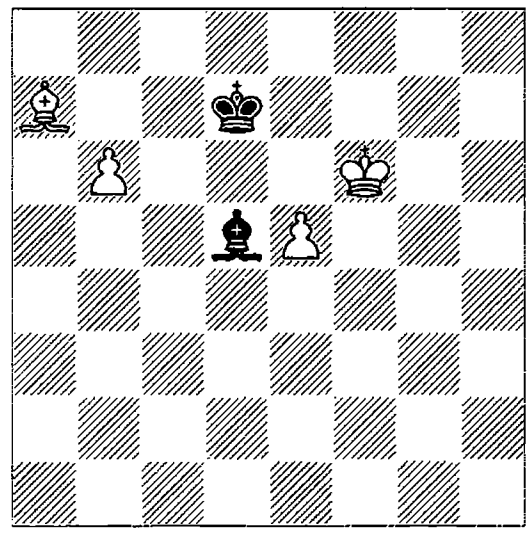
- Since passed pawns are very important in opposite-coloured bishop endings, it is often worth sacrificing some pawns to create a passed pawn.
- Two widely-separated passed pawns can be decisive, so if you already have one passed pawn, a breakthrough may be a good way to create a second one.
- The defender need not take every pawn that is offered. Look for a way to maintain the blockade rather than grabbing material.

5.4 Disconnected Passed Pawns

The ending of bishop + two disconnected passed pawns vs bishop is quite tricky. The main points are:

- The further apart the pawns are, the better for the attacker. With three files between the pawns, it is usually a win.
- If the defender can use his bishop to stop both pawns along the same diagonal, then his drawing chances are increased.
- The attacker often has to use zugzwang to make progress.

The following example demonstrates that zugzwang and triangulation can play a major role in this ending.



Jones – L. Edmonson
USA 1983

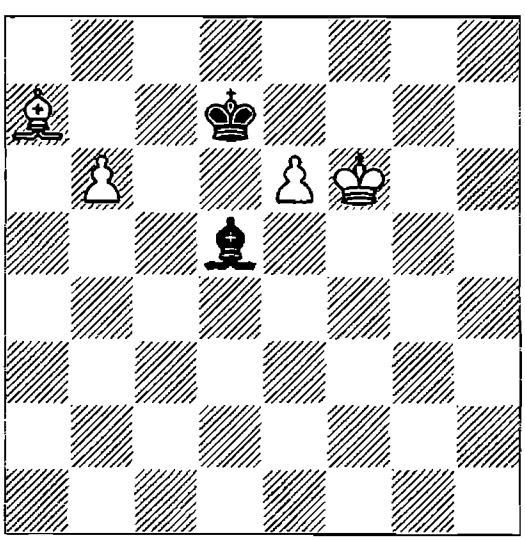
White won this game, but according to Minev's notes in *Informator 36* the position is a draw. He is partly right in that he correctly identifies the missed possibility that would have allowed Black to draw in the game continuation.

However, he overlooks that the diagram position is winning for White by another method. White's only problem is the poorly placed bishop on a7; if he can extract this bishop from the corner, he will have a technical win. It is worth noting, however, that if Black could get his king to e6 then the position would be a draw wherever White's bishop is, since with Black's king on e6 and his bishop on b7 White's king is shut out on the queenside, while if White tries to penetrate on the kingside Black meets ♔g5 by ...♔f7!, and then ♔f5 with ...♗c8+!, and again there is no way through.

1 e6+? *(D)*

1 ♗b8! was the only move to win; after 1...♔c6 2 ♗c7 ♔d7 White has succeeded in partially activating his bishop, but at the moment he cannot extract it completely because 3 ♗d6 is met by 3...♔c6, and the bishop must return to c7. However, if it were Black to move here he would be in zugzwang and would have to make a concession allowing White to transfer his bishop to a better square. Therefore White must triangulate with his king in order to lose a tempo: 3 ♔f5! ♗e6+ 4 ♔g6! ♗d5 5 ♔f6 ♗c4 6 ♗d6 (now White's bishop threatens to escape into the open, for example at b4) 6...♔c6 7 ♗c5! (this is the point: the zugzwang forced Black's bishop to abandon the a8-h1 diagonal, and now this move becomes possible) 7...♔d7 8 ♗b4 ♗b3 9 ♗a5! (the next step: White threatens b7) 9...♗d5 (9...♔c6 10 e6 also wins for White) 10 e6+ ♔e8 11 ♔e5 ♗f3 12 ♔d6 ♗g2 13 ♗b4 ♔d8 14 e7+ ♔e8 15 ♔c7 and White wins.

B



1...♔e8?

Now White wins easily by transferring his king to c7. The alternatives were:

1) 1...♗xe6? 2 b7 and the pawn promotes.

2) 1...♔c6? loses to 2 e7 ♔d7 3 b7 ♗xb7 4 ♔f7.

3) 1...♔d8? 2 e7+ ♔e8 (2...♔d7 3 b7 ♗xb7 4 ♔f7 also wins for White) 3 ♔e5 ♗b7 4 ♔d6 ♗f3 5 ♗b8 followed by ♗c7-d8 and then ♔c7, when White wins.

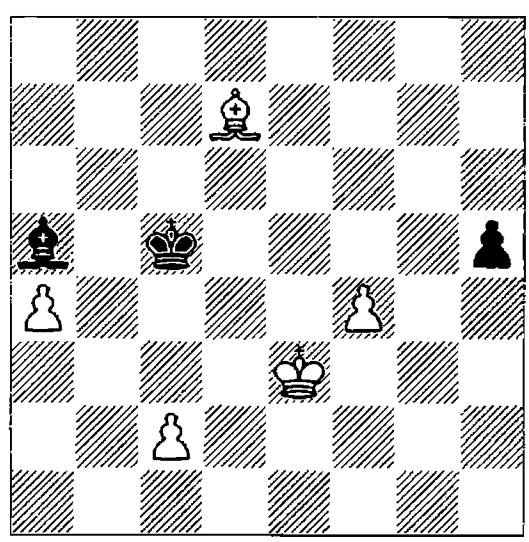
4) 1...♔c8! (the only drawing move, imprisoning the bishop on a7) 2 e7 (forced, as otherwise Black draws by ...♗xe6 followed by ...♔b7) 2...♗c6! 3 ♔f7 ♔b7 4 e8♕ ♗xe8+ 5 ♔xe8 ♔a8 with a standard positional draw.

2 ♔e5 ♗b7 3 ♔d6 ♗a8 4 ♗b8 ♗b7 5 ♗c7 1-0

5...♗g2 6 e7 ♗f3 7 ♗d8 ♗g2 8 ♔c7, followed by b7, wins the bishop.

Deciding whether a position with two extra pawns is a win can be quite complicated. Once again, general plans regarding the positioning of pieces can be more important than concrete variations.

W



A. Ivanov – Palatnik
USSR 1980

This is a very complicated ending that defeated both players at the board; moreover, Alexander Ivanov's later notes in *Informator 31* contain many errors. In order to understand the position we have to establish some basic principles. In general, White's bishop must prevent Black's h-pawn from advancing by controlling

h3. At the moment the bishop stands on d7, where it also usefully defends the a-pawn, but on this square it is hard for White to make progress. The reason is that playing f5 releases the bishop's control over h3 and allows the h-pawn to advance. It is true that White can play his king to g4 (when Black should put his bishop on d8, where it both defends the h-pawn and prevents a5 by White) and then play f5. However, the black bishop prevents f6, while any attempt to support the f-pawn with the king allows ...h3, since this square is no longer under the control of White's bishop.

It follows that White cannot make any real progress while his bishop is on d7. The alternative plan is to put the bishop on f1, which controls h3 but at the same time allows White to advance the f-pawn without interrupting the bishop's control over h3. The success of this plan depends on the time element. Once White's bishop has relinquished control over a4, Black can pick up this pawn by ...♔b4 and ...♔xa4. If Black has time to take the a-pawn, bring his king back to b4 and blockade the c-pawn with his bishop on c5, then the position will be a draw even if White's f-pawn is on the seventh rank. It is more promising for White to try pushing the c-pawn while Black is taking the a-pawn. If White can get his c-pawn past a possible blockade on c5, then he will usually win, as Black cannot then stop both pawns using his bishop along one diagonal.

Thus the crucial element is often whether White can play c5 after Black's ...♔xa4. From Black's point of view, he wants to blockade c5 as quickly as possible after ...♔xa4, so he should keep his bishop on a square controlling c5, so that ...♔b4 sets up the blockade in a single move. Since, in addition, Black's bishop should prevent a5 by White and be ready to move to d8 in case White plays his king to g4, we come to the conclusion that Black's bishop is best posted on b6.

As we shall see, the situation changes when the white king advances as far as e6; then the best square for Black's bishop is often a5, ready to move to b6 to cover c5 or to play ...♗d2 to attack the f4-pawn, which has been left undefended by the white king's advance. This is the key conclusion of our 'general principles' analysis, and it is the one missed by the players and the *Informator* analysis. Of course, we need to check that the concrete analysis backs up the above logic but, as we shall see below, it does. Therefore we can say that the diagram position is a draw, but only if Black defends accurately and in particular understands the importance of keeping his bishop on b6 or a5 as appropriate.

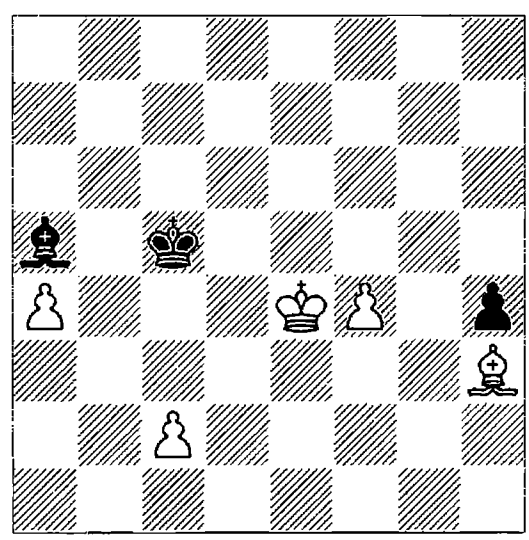
1 ♔e4 h4!

It is important to frustrate any possibility of White playing f5. There are other moves that draw, but ...h4 is an important part of Black's defence so he may as well play it straight away. 1...♔b4? is wrong since Black should never allow ♔d5 followed by c4, as then by playing a5 White can ease his c-pawn past a blockade on c5. White wins after 2 ♔d5 h4 (2...♔c3 3 f5 also wins for White) 3 ♗h3 (not at once 3 c4? ♗c7 and Black draws) 3...♗d8 (3...♔xa4 4 c4 ♗d2 5 f5 ♔a5 6 c5 and White wins easily) 4 c4 ♗b6 5 a5 and the pawns advance.

2 ♗h3 *(D)*

2 ♔f3?! ♗d8 3 f5 ♔b4 4 ♔e4 (4 ♔g4 ♔c3 is also a draw) 4...♔c5 is an easier draw.

B



2...♗c3?

This move was given an exclamation mark in *Informator*, although it loses, while the only move to draw, 2...♗b6!, wasn't mentioned at all. The alternatives are:

1) 2...♗d8? 3 f5! ♔d6 (3...♔b4 4 ♔d5 ♔xa4 5 c4 also wins for White) 4 ♗f1 ♗a5 5 ♔f4 ♗d8 6 ♔g4 ♔e5 7 ♗d3 ♔d6 8 a5 ♗xa5 9 ♔xh4 ♗c3 10 ♔g5 ♔e7 11 ♔g6 and White

wins, as zugzwang will force Black to release the c-pawn at some point.

2) 2...♗b6! 3 ♔f5 (3 f5 ♔b4 4 ♔d5 ♔xa4 5 c4 ♔b4 and 3 ♗f1 ♔b4 4 ♔d5 ♔xa4 5 c4 ♔b4 both allow Black to blockade c5) 3...♗c7 4 ♔g4 ♔b4 5 f5 ♗d8 draws.

3 ♔f5?

A mistake giving Black time to reorganize his defence. White should have struck at once by 3 ♗f1! (the threat is ♔f5-g4, when Black must release the c-pawn) 3...♔d6 (or 3...♗a5 4 f5 ♗d8 5 ♔e5 and the f-pawn advances) 4 ♔f3 ♗a5 5 ♔g4 ♗d8 6 a5 ♗xa5 7 ♔xh4 ♗d2 8 f5 ♔e5 9 ♔g4 ♔f6 10 c4 ♔e5 11 ♗g2 ♗e3 12 ♗h1, when Black is in zugzwang and loses.

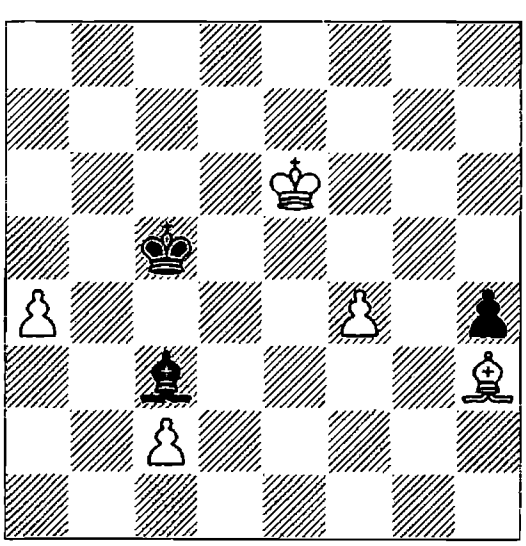
3...♗a5!

The only drawing move, heading back to the key square b6. According to *Informator*, Black can also draw with 3...♔b4? 4 ♔g5 ♗d2 5 ♔g4 ♔xa4 6 f5 ♔b4 7 ♗f1 ♔c3 8 ♗d3 ♔d4! 9 f6 ♔e5 10 f7 ♗b4 11 ♔xh4 ♔f6 12 ♗c4 ♔g6 13 ♔g4 ♗d6 14 ♔f3 ♔f5 15 ♗b3 ♗a3 16 ♔e3 ♔e5 17 ♔d3 ♗e7 18 ♔c4 ♗f8 19 ♔b5 ♗e7 20 ♔c6 ♗f8, but then White wins by 21 c4! and Black is in zugzwang; for example, 21...♗a3 22 c5, 21...♔d4 22 ♔d7 or 21...♔f6 22 c5.

4 ♔e6 ♗c3? *(D)*

Black persists with playing his bishop to this square, even though it loses. 4...♗b6! is a draw as before, and in this particular position Black had a second draw by 4...♗d2! 5 f5 ♔b4 6 ♗f1 ♔xa4 7 c4 ♔b4 8 ♔d5 ♗e3 9 f6 ♗c5, when he is in time to establish the blockade along the a3-f8 diagonal.

W



5 ♗g2?

5 f5? ♔b4 6 f6 ♔xa4 7 f7 ♗b4 8 c4 ♔a5 9 ♔d5 ♔b6! is also wrong, but White could have won by 5 ♗f1!, exploiting the misplaced black pieces; after 5...♔b4 6 ♔f5 ♔xa4 7 ♔g5! (7 ♔g4? ♗f6 is a draw) 7...♗d2 8 ♔g4 ♔b4 9 f5 ♔c3 10 ♗d3 ♔d4 11 ♔xh4 ♔e5 12 ♔g4 White wins as in the note to his third move.

5...♗d2!

The correct decision: Black forces White to decide whether to push the f-pawn. 5...♗a5? is too late as the white king is ready to support the f-pawn and he wins by 6 f5 ♗b6 (or 6...♔b4 7 ♔d5) 7 f6 ♔b4 8 ♔d5 and Black cannot take the a-pawn. 5...♔b4? is also wrong since White wins by 6 ♔f5 ♔xa4 7 ♔g5, as in the analysis of 5 ♗f1!.

6 f5 *(D)*

Or 6 ♔f5 ♗a5! 7 ♔e6 (7 ♔e4 ♗b6! draws as above) 7...♗d2!, repeating the position.

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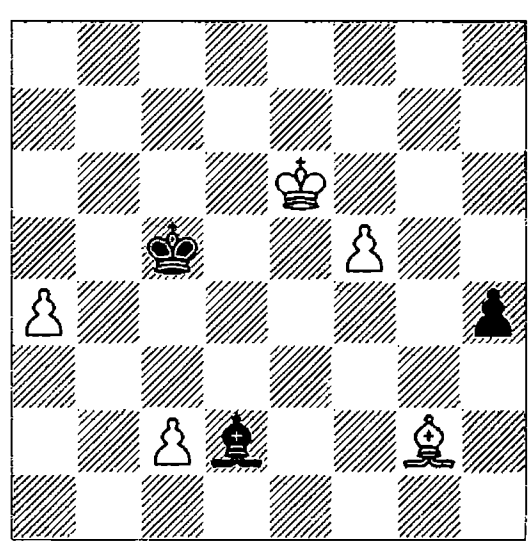


6...♔b4

Now Black is in time to take on a4 and the draw is inevitable.

7 ♔d5

7 f6 ♔xa4 8 c4 ♗e3 9 ♔d5 ♔b4 is also a draw.

7...♗c3!

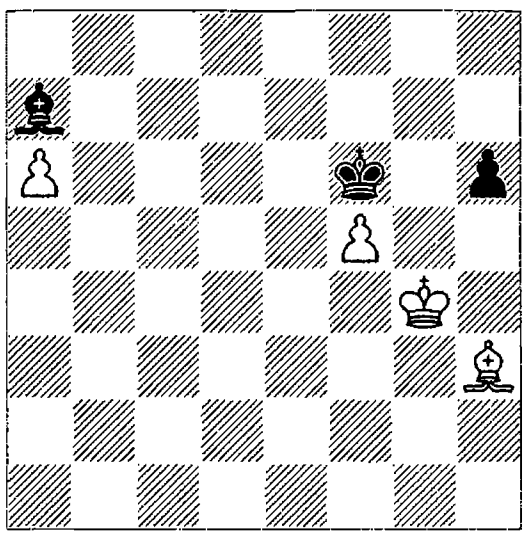
The only move, but a good one.

8 ♔e6 ♔xa4 9 f6 ½-½

It's a draw after 9...♔b4 10 f7 ♗g7 11 ♔e7 ♔c3 12 ♗e4 h3.

In the ending of ♗+2♙ vs ♗+♙, the defender's pawn is often of little help, since the

attacker can manoeuvre with his bishop while keeping the pawn under control. However, there are cases in which the pawn makes a difference. The following position, which deceived a strong grandmaster, is an example.



Aronian – Bacrot
FIDE World Cup, Khanty-Mansiisk 2005

Black resigned here (**1-0**), even though the position is a draw. The position would be lost without Black's h-pawn, as the two white pawns are far apart and cannot be blockaded by the bishop along one diagonal. Bacrot probably reasoned that the position is lost without the h-pawn, and the additional pawn is not going to make any difference. However, this case is an exception and the h-pawn provides the vital ingredient that enables Black to draw.

If White could get his king to b7 and win the enemy bishop, then he would be sure of victory, since his bishop can stay on h3, defending the f5-pawn while at the same time blocking Black's h-pawn. However, this is not possible, as the following analysis shows.

1 ♔f4 h5 2 ♔e4 ♔e7 3 ♔d5 ♔d7 is the key position, and now:

1) 4 ♗f1 h4 5 ♗b5+ ♔e7 (this is where the h-pawn comes in handy; White can't simply play ♔c6 and ♔b7, winning the bishop, because once the h-pawn has gone past h3, it can be used to deflect the white bishop away from the defence of the f5-pawn) 6 ♔c6 (6 ♔e5 ♗b8+ 7 ♔e4 h3 8 ♔f3 ♔f6 9 ♗d7 h2 is a total draw) 6...h3 7 ♔b7 h2 8 ♗c6 ♗f2 9 a7 ♗xa7 10 ♔xa7 ♔f6 11 ♗e4 h1♕ with a draw.

2) 4 f6+ (advancing the pawn to f6 may look like progress, but White faces the same problem that arises if he allows Black's pawn to h2: he must defend the f-pawn with his bishop, but if the bishop is not actually blocking the h-pawn, Black can use the h-pawn to deflect the bishop from the defence of the f-pawn) 4...♔e8 5 ♗e6 h4 6 ♔c6 h3 7 ♗d5 h2 8 ♔b7 ♗f2 9 a7 ♗xa7 10 ♔xa7 h1♕ 11 ♗xh1 ♔f7 and Black wins the last pawn.

The story is the same in every line. White can only force his king through to b7 at the cost of either pushing his pawn to f6 or allowing the h-pawn to run up to h2. In either case Black can draw after he surrenders his bishop for the a-pawn.

Summary:

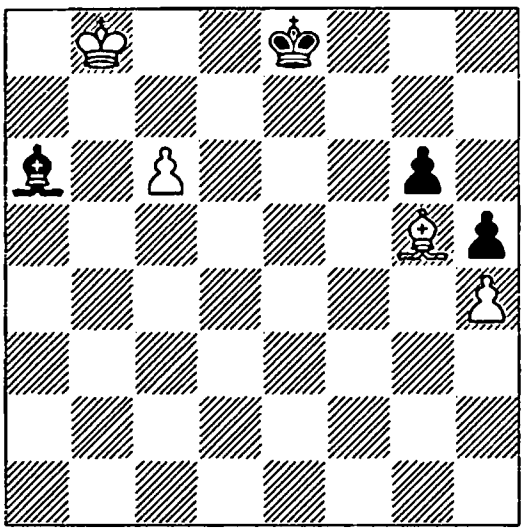
- Two disconnected passed pawns are a powerful force in opposite-coloured bishop endings. Their strength increases when they are far apart.
- It is likely that the opponent will blockade one pawn with the bishop and one with the king. In order to win it is usually necessary to penetrate with the king towards the pawn that is blockaded by the bishop. To achieve this, zugzwang is often helpful to the attacker.
- A lone pawn may not be much help to the defender. It depends on whether the pawn can be used to deflect the attacker's bishop away from the defence of one of the pawns.

5.5 Zugzwang

We have already seen several occasions in which zugzwang played a significant role in an opposite-coloured bishop ending. This is not at all unusual and it is worth looking at a couple of positions in which zugzwang is the dominant element.

In order to win the position in the diagram overleaf, it is necessary to think logically. White cannot achieve anything directly, since c7 is met by ...♔d7. But what happens if it is Black to play? Then White wins, because Black must move his king to the f-file, allowing White to

W



D. Stanković – Vulinović
Čanj 1998

win the bishop by pushing the c-pawn. The resulting position with an extra piece is a simple win as White has the right bishop for the h-pawn. White cannot transfer the move to Black immediately as he has no suitable waiting move, but a standard method of losing a tempo is to triangulate with the king, and here White has the triangle b8-a7-a8 available.

1 ♗f6?

White fails to spot the winning line and indeed throws the win away completely by allowing Black to improve his king position. The winning line was 1 ♔a7! (1 ♔a8! ♗c8 2 ♔a7 also wins) 1...♗c8 2 ♔a8 ♗a6 (2...♗f5 3 ♔b8 followed by c7 again wins the bishop) 3 ♔b8 and now Black is to move.

1...♔f7!

Black finds the only drawing possibility, exploiting the vulnerable position of the white bishop.

2 ♗c3

2 ♗g5 ♔e6! draws as Black has the possibility of ...♔d6.

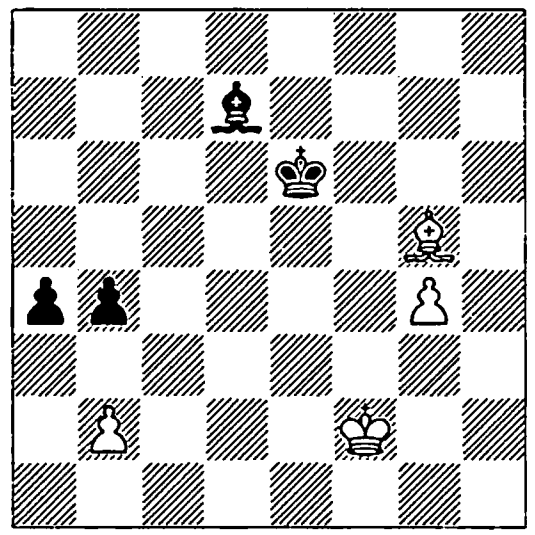
2...g5!

The simplest method; Black's passed pawn draws instantly.

3 hxg5 h4 ½-½

In order for zugzwang to play a part, there must be some reason why the defender's bishop is restricted. Often, as in the previous example, it is the need to restrain a passed pawn which acts as a ball and chain to limit the bishop's movement. In the following position it is a threatened breakthrough.

B



Gonzales Mata – Sisniega
Mexico 1991

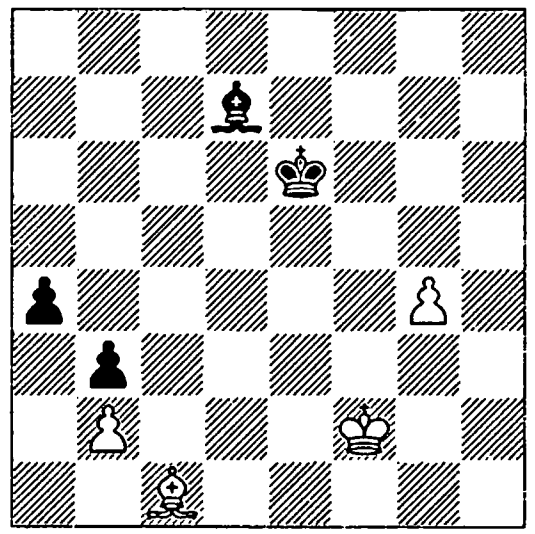
Material is equal, few pawns are left on the board and there are opposite-coloured bishops. It might seem that the time is ripe for Black to offer a draw but, unlikely as it might seem, he has a winning position.

1...b3!

Threatening to win at once with ...a3; White's misfortune is that he cannot play his bishop to f6 or e7 here (either of which would secure an easy draw) so he is forced to meet this threat by retreating his bishop to c1.

2 ♗c1 *(D)*

B



The bishop is now paralysed since if it moves away from c1, Black wins with ...a3.

2...♔d5

Black's strategy is eventually to force his king through to the c2-square by repeated zugzwangs. However, this plan is complicated by the additional need to keep the g-pawn under control.

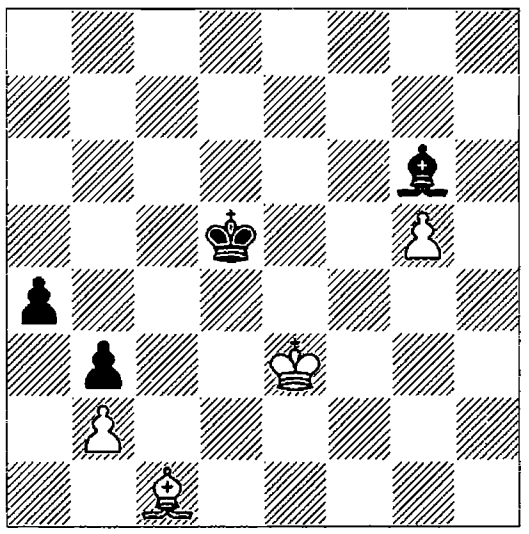
3 g5

White decides to push the g-pawn straight away, but this allows Black's bishop to move at once to the b1-h7 diagonal where it is very well posted (because the b-pawn's promotion square is defended, so that even if the white king is close to the queenside, Black will still be able to meet a bishop move by ...a3).

3 ♔e3 is the alternative, threatening to play the king to c3, which would guarantee a draw. However, even in this case Black wins: 3...♔c4 4 g5 (or else Black takes the pawn) 4...♗f5 5 ♔f4 ♗g6 6 ♔e3 ♔d5! transposing into the game after Black's 4th move.

3...♗f5 4 ♔e3 ♗g6 *(D)*

W



In this line d3 is already under control, so Black need not fear White transferring his king to c3.

5 ♔e2

5 ♔f3 ♔d4 6 ♔e2 ♗h5+ transposes to the game.

5...♔e4! *(D)*

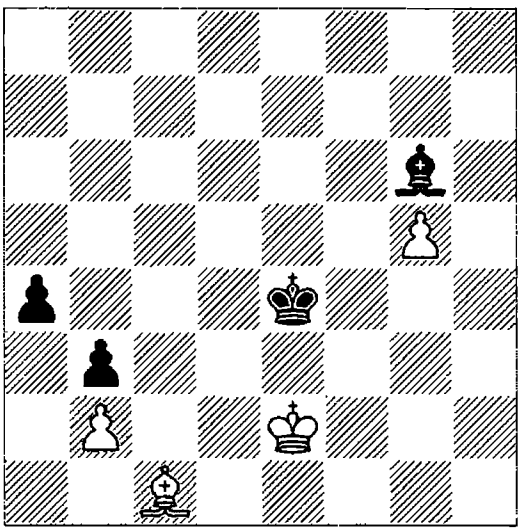
This is the quickest route to victory, although 5...♔d4 6 ♗e3+ ♔d5 (Black must prevent ♗c5) 7 ♗c1 ♔e4 leads to the same position.

6 ♔d2 ♔d4 7 ♔e2

White tries to keep Black's king out of d3 for as long as possible.

7...♗h5+

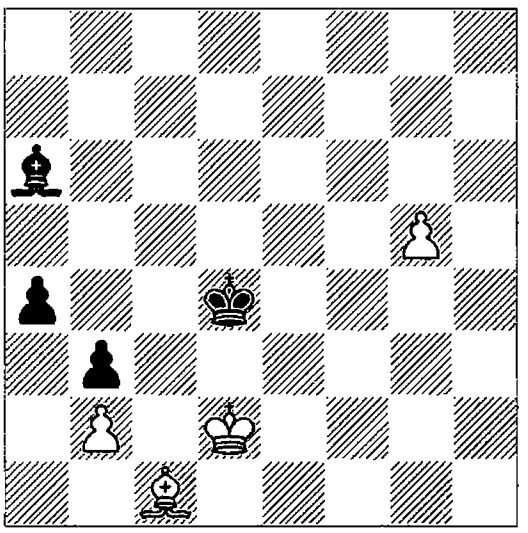
W



Black is aiming for the position with White's king on d2 and his own bishop on c4, after which White will sooner or later have to allow ...♔d3. It doesn't matter that White's pawn may advance to g7 during this process.

8 ♔d2 ♗e8 9 ♔e2 ♗b5+ 10 ♔d2 ♗a6 *(D)*

W



White can only move his g-pawn.

11 g6 ♗b5 12 g7 ♗c4 0-1

Black reaches the key zugzwang and after 13 ♔e1 ♔d3 14 ♔d1 ♗d5 15 ♔e1 ♔c2 16 ♗g5 a3 he promotes a pawn.

Summary:

- If the defender's bishop is paralysed, then zugzwang becomes a possibility, together with associated motifs such as triangulation.
- The paralysis of the defender's bishop is usually the result of having to hold up a passed pawn, or prevent a breakthrough leading to an inevitable promotion.

6 Bishop vs Knight Endings

6.1 Introduction

We shall not consider the most basic endings, such as ♗+♙ vs ♘ and ♘+♙ vs ♗, in any systematic way, since these are covered elsewhere; for example, a good basic explanation is given in *Understanding Chess Endgames*, Sections 34 and 35, while *Secrets of Minor-Piece Endings* (Batsford, 1995) deals with these single-pawn endings in great detail. Instead, we shall focus on some material balances that are poorly covered elsewhere, and examine the factors which play a part in the eternal battle of bishop against knight.

We start in Section 6.2 (page 253) with situations in which the bishop has the advantage. The first topic here is the extra outside passed pawn, covered in Section 6.2.1 (page 253). Knights struggle to deal with distant passed pawns, so one might expect that this situation would almost always lead to a win for the bishop. This is largely true, but there are exceptions, for example if the passed pawn is relatively close to the remaining pawns, or if there is a blockade that prevents the attacker's king from penetrating. Section 6.2.2 (page 257) again raises the subject of the blockade, this time in the particular context of endings with ♗+2♙ vs ♘. Contrary to expectations, the two extra pawns do not always guarantee success, since it can be difficult to lift a blockade, although zugzwang sometimes provides the means to do so. In Section 6.2.3 (page 259) we look at various positional factors which can favour the bishop, such as an active king, or unbalanced or vulnerable pawns. Finally, in Section 6.2.4 (page 264) we see how a bishop supporting an advanced passed pawn can be overwhelming even in the face of a material disadvantage.

Section 6.3 (page 268) takes the opposite side and considers situations in which the knight has the advantage. We start in Section 6.3.1 (page 269) by looking at positions in which the knight has an extra pawn. This is a more interesting and complex situation than the one with the minor pieces reversed. The long-range power of the bishop often renders it hard for a knight to make full use of an extra pawn, especially if there are unbalanced pawns. We shall look at several positions with different types of pawn-structure, ranging from those with all the pawns on one side to those with pawns scattered across the board, and see how the pawn-structure affects the ability of the knight to exploit the extra pawn.

In Section 3.5.1 (page 153) we saw how knight endings often depend on unexpected knight manoeuvres. The same type of manoeuvres can arise in knight vs bishop situations, and in Section 6.3.2 (page 276) we look at some examples of positions mishandled through overlooking the possibilities presented by the knight.

Knights and passed pawns can make a slightly awkward combination. Since the knight can reach every square on the board, in the absence of the kings, a knight can always usher a passed pawn up the board to promotion. However, suppose as White you have a knight on e4 supporting a passed pawn on g5. Then, if g6 is covered, it takes three moves to manoeuvre the knight round to control g6 and advance the pawn another step. Thus knights can be quite clumsy at supporting passed pawns, and a great deal depends on the exact position. These and other ideas are explored in Section 6.3.3 (page 279).

Section 6.3.4 (page 282) is a mirror image of 6.2.2 in that now we look at the ending of ♘+2♙ vs ♗, which is another material balance largely ignored in traditional endgame books. Although it is generally won, there are exceptional drawn situations. Finally, in Section 6.3.5 (page 286) we take a brief look at the topic of

bad king position. All the advantages of having bishop vs knight and an outside passed pawn can be nullified if your king is trapped on the edge of the board, blocking the pawn (this is similar to some positions we looked at in Section 2.4.1 on page 65).

6.2 The Bishop Has the Advantage

Factors favouring the bishop include:

- An open position, especially if the centre is free of pawns.
- An asymmetrical pawn-structure, especially if the side with the bishop has a passed pawn or a majority that can easily create a passed pawn.
- A 'good' bishop, in other words one which is not impeded by its own pawns.

In addition to these special features, the usual positional factors apply, such as active king position and space advantage.

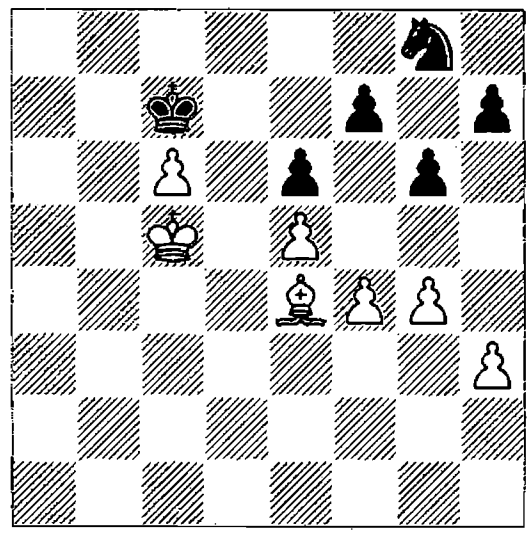
6.2.1 Extra Passed Pawn

An extra outside passed pawn is a large advantage in a bishop vs knight situation, since the short-range knight may be effectively sidelined by the need to restrain the enemy pawn. The defender has slightly better chances if the passed pawn can be blockaded by the king, but even so his task is unenviable.

In the following position White is a pawn up and Black's kingside pawns are stuck on squares where they can be attacked by White's bishop. However, it is unusual in that the passed pawn is relatively close to the pawn-mass, and there are no obvious entry points on the kingside. It should still be a win, but it requires a little care. The main problem is that the position is currently blocked, so White must use his kingside pawns to create an opening for his pieces. The position is indeed winning for White, but he at once makes a serious error.

1 h4?

This weakens the g4-pawn and gives Black enough extra defensive possibilities to hold



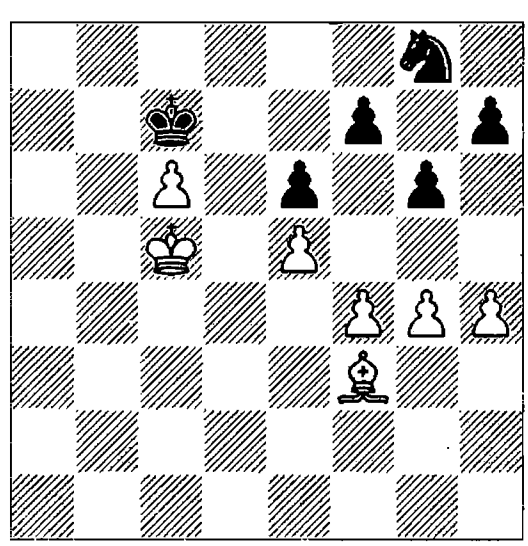
Christiansen – Botterill
Hastings 1978/9

the position. The winning line is 1 f5! exf5 (1...♘h6 2 f6 traps the knight – it is this possibility that is removed by pushing the pawn to h4) 2 gxf5 gxf5 3 ♗xf5 ♘e7 4 ♗e4 h6 5 h4 ♘c8 6 ♗d5 ♘e7 7 h5, after which Black is in zugzwang and must surrender the f7-pawn.

1...♘e7 2 ♗f3

Now, for example, 2 ♔b5 ♘g8 3 f5 is ineffective due to 3...♘h6! and Black's problems are over.

2...♘g8 *(D)*



3 h5

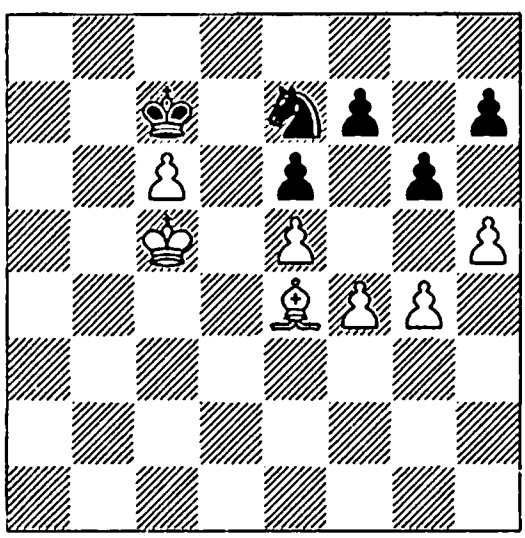
3 ♗e4 ♘e7 doesn't help White, while 3 f5 gxf5 4 gxf5 exf5 5 ♗h5 is most simply met by 5...♘e7 (but not 5...f6?, Milić's recommendation in *Informator 28*, due to 6 ♗f7 ♘e7 7 exf6 ♘xc6 8 ♗e6! ♘e5 9 ♗xf5 ♔d8 10 ♔d5 ♘f3 11 ♗xh7 ♘xh4 12 ♗e4, when White wins) 6

♗xf7 ♘xc6 7 ♔d5 f4 and Black is in no danger as he will ultimately give up his knight for the e-pawn to reach a rook's pawn plus wrong bishop draw.

3...♘e7

A satisfactory defensive move, but 3...♘h6 was even simpler, as the attack on g4 restricts White's bishop.

4 ♗e4 *(D)*



4...gxh5

In *Informator*, Milić gives this a question mark, while claiming that 4...♘g8 would have drawn. This is the reverse of the truth since 4...♘g8? loses to 5 f5! ♘h6 6 fxg6 (6 f6? ♘xg4 7 hxg6 hxg6 8 ♗xg6 ♘xe5 is only a draw) 6...fxg6 7 ♗xg6! (the move Milić overlooked) 7...hxg6 8 g5 ♘f5 (8...♘f7 9 hxg6) 9 h6 and the pawn promotes.

5 gxh5 h6 6 ♔b5 ♘c8 7 ♔c5 ♘e7 8 ♗g2 ♘f5 9 ♗f3 ♘e7?

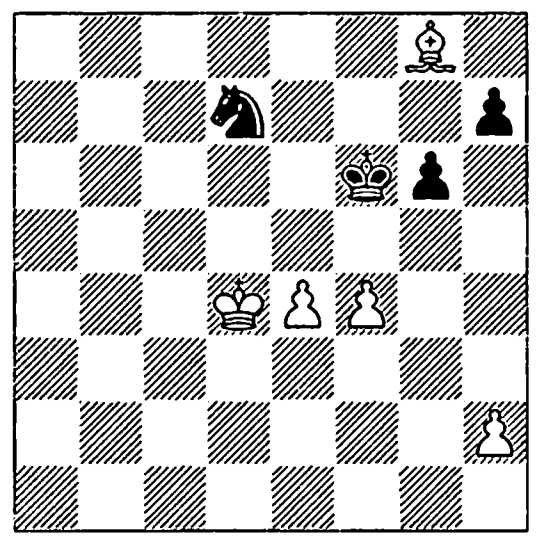
It is this move which loses, because now White's bishop can occupy the strong square e4. 9...♘g3! was the only move to defend, keeping the bishop tied down to the defence of h5; after 10 ♔b5 ♘f5 11 ♗d1 ♘g3 White cannot make progress.

10 ♗e4

Now Black's knight has to retreat, and White can break through with f5.

10...♘g8 11 f5! exf5 12 ♗xf5 ♘e7 13 ♗e4 ♘c8 14 ♗f3 ♘b6 15 ♗d1 ♘c8 16 ♗b3 ♘b6 17 ♗xf7 ♘a4+ 18 ♔d4 ♘b6 19 ♗e8 ♘c8 20 ♗d7 ♘b6 21 ♔e4 ♔d8 22 ♔f5 ♔e7 23 ♗e6 1-0

In the following example, the 'outside' passed pawn isn't really outside at all, but such is the advantage conferred by a bishop + passed pawn combination that White is still winning.



Petukhov – A. Kuznetsov
USSR 1977

This position looks grim for Black since he is not only a pawn down, but in addition White has a passed pawn and active pieces. The only hope is to try to exchange some pawns and eventually reach a position in which White has a rook's pawn and the wrong bishop. According to Yudovich's notes in *Informator 24*, Black should be able to draw, but this conclusion is incorrect.

1...g5 2 e5+!

The most accurate move, as the preliminary check forces Black's king into a less active position. 2 fxg5+?! ♔xg5 3 ♗e6 (3 ♗xh7? ♘f6 followed by ...♘xe4 and 3 e5? ♘xe5 lead to a draw) 3...♘f6 4 e5 h5 gives Black drawing chances.

2...♔g7 3 ♗e6

3 e6? ♘f6 is a draw.

3...♘f8

This is now forced, but the knight cannot easily escape from f8.

4 ♗f5?!

Missing a simple win by 4 f5! ♘xe6+ (4...h5 5 f6+ ♔g6 6 ♔d5 is hopeless for Black) 5 fxe6 ♔f8 6 ♔e4 ♔e8 (6...♔e7 7 ♔f5 and White wins after 7...h6 8 h3 or 7...g4 8 ♔xg4 ♔xe6 9 ♔f4) 7 ♔f5 ♔e7 8 ♔xg5 ♔xe6 9 ♔f4 and now the pawn ending poses no problems for White.

4...gxf4 5 ♔e4

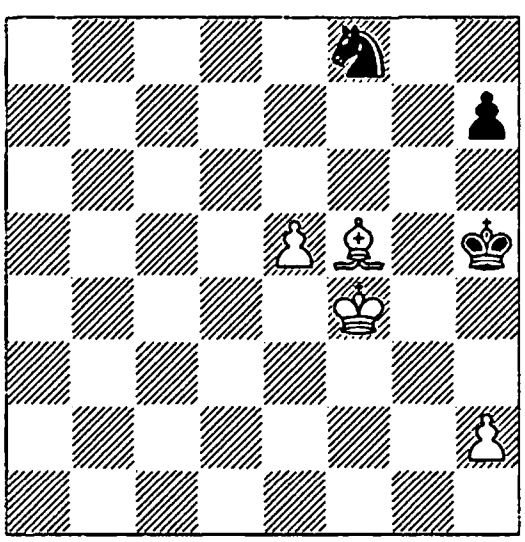
Since Black cannot afford to allow the exchange of minor pieces, he is unable to move his knight.

5...♔h6!

Black's best chance is to play actively. Passive defence is hopeless; for example, 5...♔f7 6 ♔xf4 ♔g7 7 ♔e4 ♔f7 8 ♔d5 ♔e7 9 h4 ♔f7 10 ♔d6 h6 (10...h5 11 ♗c2 ♔g7 12 ♔e7 also wins for White) 11 h5 ♔g8 12 ♔e7 ♔g7 (now White must lose a tempo with his bishop) 13 ♗e4 ♔g8 14 ♗d3 ♔g7 (14...♔h8 15 ♔f7 is also lost for Black) 15 ♗f5 ♔g8 16 ♔f6 ♔h8 17 ♔f7 and Black is in a fatal zugzwang.

6 ♔xf4 ♔h5 *(D)*

W



7 ♔f3?

White misses the winning continuation. 7 e6? is also wrong as 7...♘xe6+ 8 ♗xe6 ♔g6 leads to a draw.

7 h3! is correct:

1) After 7...♔h4 8 e6 ♘xe6+ 9 ♗xe6 ♔h5 10 ♔f5 ♔h6 11 ♔f6 Black's king cannot reach h8 and so he loses.

2) 7...h6 8 ♗d3 ♔h4 9 ♗f1 ♘e6+ 10 ♔f5 ♘g7+ 11 ♔f6 ♘e8+ 12 ♔f7 ♘c7 13 e6 ♘xe6 14 ♔xe6 ♔g5 15 ♔f7 h5 16 ♗c4 ♔h6 17 ♗d3 ♔g5 18 ♔g7 ♔h4 19 ♗f5 ♔g5 20 ♗e6 is also winning for White.

3) 7...♔h6 8 ♔g4 ♔g7 9 ♔g5 ♔f7 (now that Black's king has been driven back, White can switch his king to the d-file) 10 ♔f4 ♔g7 11 ♔e4 ♔h6 (this is too late, but passive defence loses as in the note to Black's 5th move) 12 ♔d5 ♔g5 13 ♗d3 ♘d7 (13...h5 14 ♔d6) 14 e6 ♘f6+ 15 ♔e5 ♘g8 16 ♗xh7 ♘e7 17 ♗e4 ♘g8 18 ♗d3 ♘e7 19 h4+! ♔xh4 20 ♔d6 ♘g8 21 ♗h7 ♘f6 22 e7 and White wins; for example, 22...♔h5 23 ♔e6 ♘e8 24 ♗d3 ♔g5 25 ♗e4 ♘f6 26 ♗c6 ♔g6 (now White must lose a tempo with his bishop in order to return to this position with Black to play) 27 ♗b5 ♔g5 28 ♗d7 ♔g6 29 ♗c6 ♔g5 30 ♔f7 ♔f5 31 ♗b5 ♔e5 32 ♗d3 with zugzwang.

7...♔g5

Black seizes his chance.

8 ♔e4 h5!

This is a position of reciprocal zugzwang.

9 h4+

The last winning try, as after 9 h3 h4 White has no waiting move; then 10 e6 ♘xe6 11 ♗xe6 ♔f6 draws at once, while 10 ♗g4 ♘g6 11 e6 ♔f6 offers no winning chances.

9...♔xh4 10 ♔f4 ♘e6+!

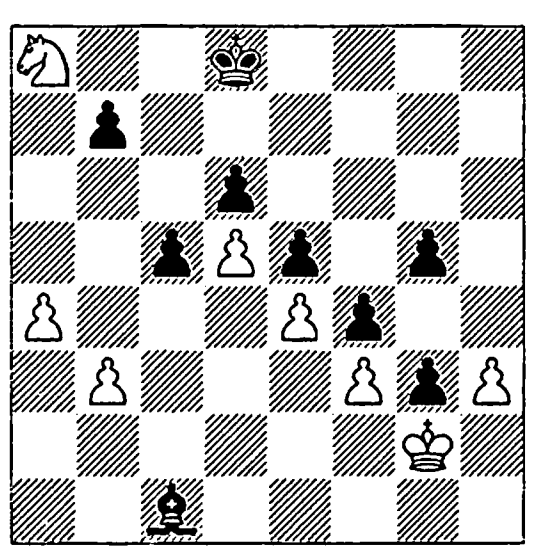
10...♘d7 also draws, based on the same stalemate idea, but the move played is simplest.

11 ♗xe6 ½-½

Stalemate.

The following position is unusual because although Black has an extra protected passed pawn on the sixth rank, his bad bishop and the generally blocked pawn-structure give White chances of creating a fortress.

B



Nebylitsin – Galuzin
USSR 1969

In this odd position White's king is tied to the kingside by Black's protected passed pawn. Black's only problem is that he is restricted to

attacking on a narrow front because the rest of the board is blocked. Everything depends on whether White can set up a blockade on the queenside using only his knight.

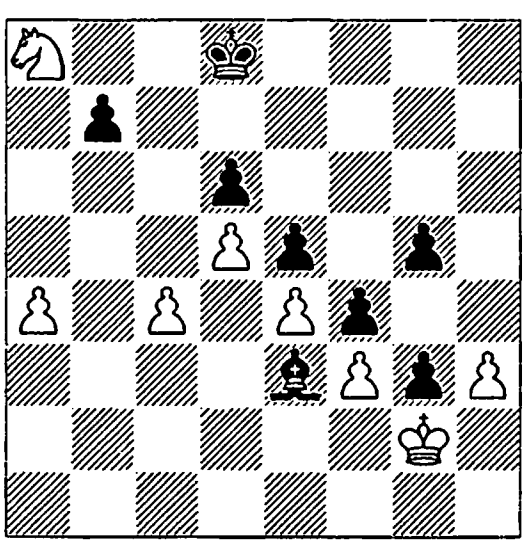
1...c4?

A mistake which allows White to draw. Black could have won by 1...♗d2! 2 ♘b6 ♗a5 3 ♘c4 ♗c7 (the idea of retreating the actively-placed bishop to c7 is perhaps not the most intuitive, but by defending the d6-pawn Black frees his king to march to a6) 4 ♘a3 (if White waits, then Black moves his king to a6 and plays ...b5, opening up the queenside for penetration) 4...b6 5 ♘b5 ♗b8 (now the bishop appears totally dead, yet White cannot save the game) 6 ♘a3 (the knight returns to c4, as otherwise Black's king goes to a5 and b4) 6...♔c8 7 ♘c4 ♔b7 followed by ...♔a6 and ...b5, and Black wins. The idea of playing the bishop from d2 to b8 is easy to overlook.

2 bxc4 ♗e3 *(D)*

In order to free the knight, White must push his pawn to a5, but then it is vulnerable to attack.

W



3 a5 ♗d2

After this the draw quickly becomes clear, as White transfers his knight to a4 while playing a6 at a moment when Black must take this pawn, after which there is a complete blockade on the queenside. The only real winning chance for Black is to try to avoid having to play ...bxa6 after White's a6, but it isn't possible to arrange this in a satisfactory way. Here are the alternatives:

1) 3...♔c8 4 ♘b6+ ♔c7 (4...♔b8 5 ♘d7+ ♔c7 6 ♘f8 and White wins the g5-pawn, after which his h-pawn becomes dangerous; at any rate, White has no trouble drawing) 5 ♘a8+ ♔b8 6 ♘b6 ♗c5 (defending the d-pawn in the hope of playing ...♔a7) 7 ♘d7+ ♔c7 8 ♘xc5 dxc5 9 ♔g1 with a draw.

2) 3...♗c5 4 ♘b6 ♔c7 5 ♘a8+ ♔b8 6 ♘b6 ♗b4 7 a6! ♔a7 (7...bxa6 8 ♘a4 draws as in the game) 8 axb7 ♔xb7 9 ♘d7 ♔c8 10 ♘f8 ♗a5 11 ♘e6 ♗d8 12 c5 again with an easy draw for White.

4 a6!

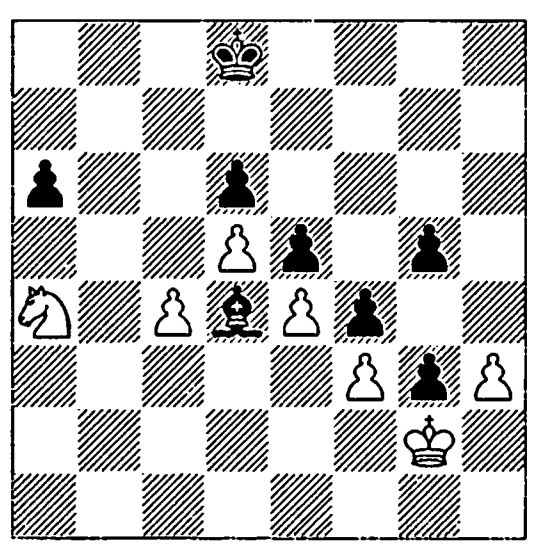
The key move. Not 4 ♘b6? ♗xa5 5 ♘a4 ♔c7 6 ♔f1 ♗b4 7 ♔g2 ♗c5 8 ♔f1 ♗d4 followed by playing the king round to a5.

4...bxa6

Certainly not 4...♔c8?? 5 a7 ♗e3 6 ♘b6+! and White wins.

5 ♘b6 ♗e3 6 ♘a4 ♗d4 *(D)*

W



Thanks to the blocking pawn on a6, there is no way for Black to penetrate with his king on the queenside. He therefore plays his king to h4 in the hope of putting White in zugzwang.

7 ♔f1 ♔e7 8 ♔g2 ♔f6 9 ♔f1 ♔g6 10 ♔g2 ♔h5 11 ♔f1 ♔h4 12 ♔g2 a5 13 c5!

The only move, but a good one. Now Black must surrender his bishop.

13...♗xc5 14 ♘xc5 ♔h5

Black now hopes to play his king back to the queenside and win White's knight for the a-pawn, but he is easily thwarted by White.

15 ♘a4! ♔g6 16 ♘c3 ♔g7 17 ♔f1 ♔f8 18 ♔g2 ♔e7 19 ♘b5!

The key move; the knight controls c7 and also prevents Black's king from moving to c8, on pain of losing the d6-pawn with check. Thus the c-file forms a barrier which Black cannot cross.

19...a4 20 ♔f1 ♔d8 21 ♔g2 ½-½

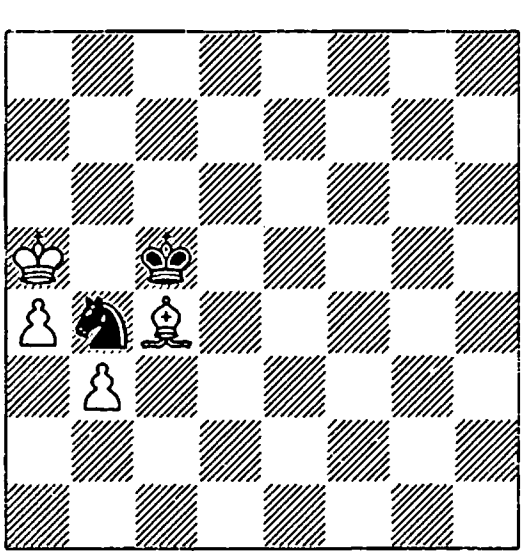
Summary:

- If the side with the bishop has an extra outside passed pawn, then he usually wins. If the passed pawn is far away from the pawn-mass, then the win is usually simple.
- Exceptions can occur if the passed pawn is close to the pawn-mass, or if there is a blockade which prevents the attacker's king from penetrating.

6.2.2 Bishops + Two Pawns vs Knight: The Blockade

In most cases a bishop and two pawns easily defeat a knight. Problems can arise in two situations. The first occurs when the attacker has the rook's pawn + wrong bishop combination. In this case, sacrificing the knight for the remaining pawn will draw provided the defender's king can reach the rook's pawn's queening square (see *Understanding Chess Endgames*, Section 26 for more on this). Here we shall focus on the second problematic situation, which arises when the pawns are on the same-coloured squares as the bishop and are blockaded by the king and knight.

W



Svetushkin – Istratescu
Bucharest 1999

White is two connected passed pawns up, and he has the right bishop for the rook's pawn, so this position might seem a trivial technical task. The problem is the initially poor position of White's pieces, with only his bishop able to move. Once White disentangles, then the win will indeed be straightforward, but it is harder to achieve this than it appears. White is winning, but it takes a little care and in the game he did not find a satisfactory solution to the problem.

1 ♗b5!

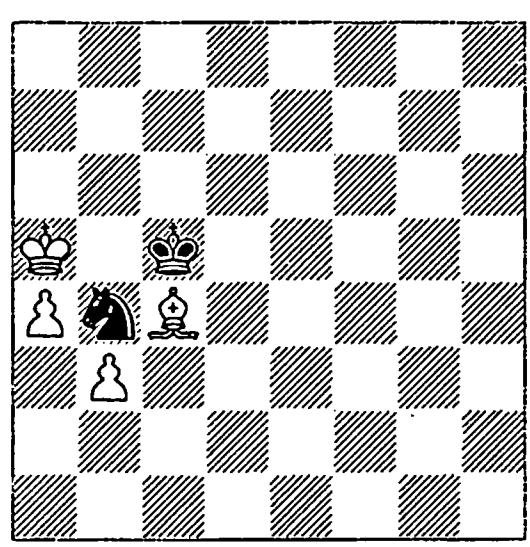
This is the only move to win. After 1 ♗f1? ♘c6+ 2 ♔a6 ♘d4 3 ♗c4 ♘c6 White is unable to make progress as he cannot advance either pawn; for example, 4 a5 loses the a-pawn due to 4...♔b4, while after 4 ♔b7 ♘a5+ 5 ♔a7 ♘c6+ 6 ♔a6 ♘b4+ 7 ♔b7 ♘c6 the pawns are still restrained.

1...♘d5 2 ♗c4?!

White is unsure how to proceed. The winning idea is 2 ♗d3! ♘b4 3 ♗e4! (forcing the knight to move to an inferior square) 3...♘a2 4 ♔a6 ♘c3 (4...♘c1 5 ♗c2 ♘a2 6 ♔b7 ♔b4 7 ♔b6 is also a win for White) 5 ♗f3 ♘a2 6 ♔b7 ♘b4 7 ♗g2 and Black is in zugzwang since a king move permits ♔b6 while moving the knight allows a5-a6.

2...♘b4 *(D)*

W



3 ♗g8?

Throwing away the win entirely. The only route to victory was 3 ♗b5!, repeating the position, and then proceeding as in the previous note.

3...♘c6+ 4 ♔a6 ♘b4+ 5 ♔b7 ♘c6

We have the same situation as in the note to White's first move; it is impossible to lift the blockade of the white pawns.

6 ♗c4 ♘a5+ 7 ♔c7 ♘c6 8 ♗g8 ♘a5 9 ♔d7 ♘c6 10 ♔c7 ♘a5 11 ♗d5!?

The last chance. White sacrifices his bishop to set his pawns in motion, but to no avail.

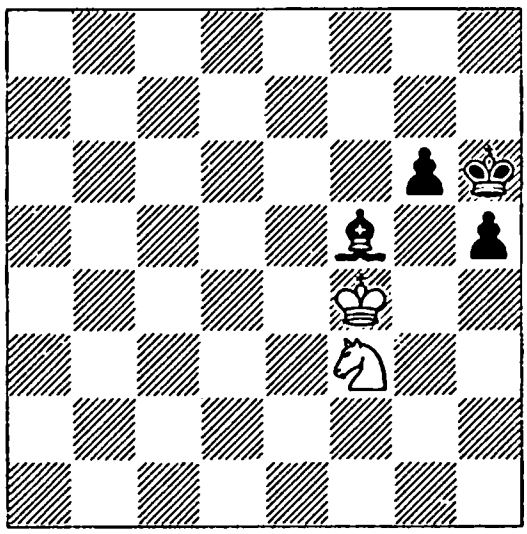
11...♔xd5 12 b4 ♘c6 13 b5 ♘a5 14 ♔b6

14 b6 ♔c5 15 b7 ♘xb7 16 ♔xb7 ♔b4 is also a draw.

14...♘c4+ 15 ♔a6 ♔c5 16 a5 ♔b4 ½-½

Even strong analysts can get positions of this type wrong.

W



Šefc – Averbakh
Dresden 1956

The above position was used in Averbakh's endgame book and was reproduced in the *Encyclopaedia of Chess Endings*. In each case the view was that White could maintain the blockade, but in reality he cannot and the position is won for Black.

1 ♘g5 h4 2 ♘f3 ♔h5 3 ♘g5 ♗d7 4 ♘e4

As Averbakh points out, 4 ♘f3 loses to 4...♗c8 5 ♘g5 h3 6 ♘f3 ♗b7 7 ♘h2 ♔h4.

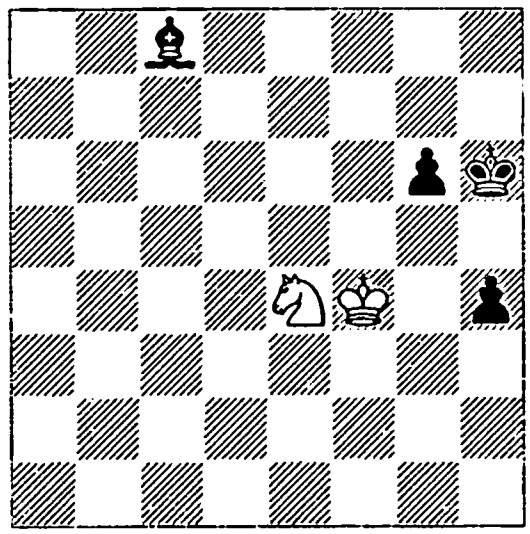
4...♗c8 5 ♘f6+ ♔h6 6 ♘e4 *(D)*

The crucial moment arrives.

6...♗f5?!

Although the position remains a win for Black, this is a step in the wrong direction. The winning idea is 6...♗e6! 7 ♘g5 ♗d5, dominating the white knight. This appears to fail due to 8 ♔g4, but then the tactical point 8...h3! kills White.

B



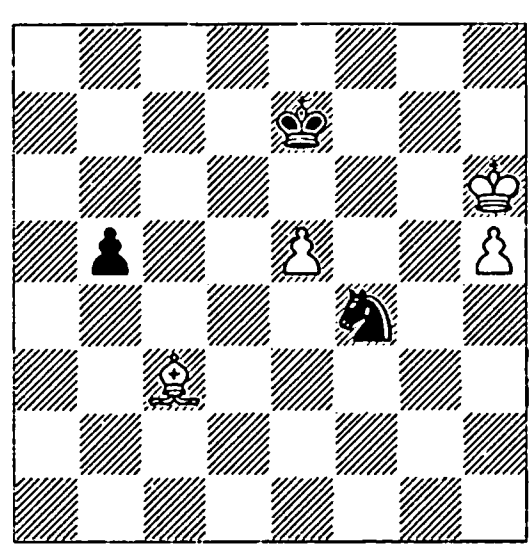
7 ♘g5 ♔h5 8 ♘h7 h3?

This move finally throws the win away. Black could still have won by retracing his steps with 8...♔h6 9 ♘g5 ♗d7, etc.

9 ♔g3 ♗e6 10 ♘f6+ ♔g5 11 ♘e4+ ♔f5 12 ♘d2 ♔f6 13 ♘f1 ♔e5 14 ♔h2 ♔f4 15 ♘g3 ♔e3 16 ♘f1+ ♔f2 17 ♘g3 ♗f5 18 ♘h1+ ♔f3 19 ♘g3 ♗c8 20 ♘h1 ♗d7 21 ♘g3 ½-½

Problems can also arise with disconnected pawns, but a genuine blockade is less likely in this case. In the following position Black still has a pawn, but a ♗+2♙ vs ♘ position could have arisen after Black's first move.

B



A. Ledger – Zapata
Port Erin 2003

White is a pawn up, both his pawns are passed and he has the right bishop for the rook's pawn. Despite this, Black can draw the position with correct play. Curiously, the move played in

the game, to which Zapata appended a double exclamation mark in his notes, actually loses, while the move which he dismissed as losing is the one that leads to a draw.

1...b4?

Giving away the passed pawn allows Black to cause White some temporary inconvenience, but should lose in the end. The drawing line is 1...♔e6! 2 ♔g5 b4! (2...♘h3+? does lose after 3 ♔g4 ♘f2+ 4 ♔f3 and now 4...♘h3 5 ♗d2 followed by ♔g2 traps the knight, while after 4...b4 5 ♗d4 ♘d3 6 h6 the pawns are too strong) 3 ♗d4 (3 ♗xb4 ♘xh5 draws at once) 3...♘d5 4 h6 ♔f7 5 e6+ (Zapata stopped his analysis here with a 'White is winning' symbol, but the position is drawn) 5...♔g8 and White is unable to make progress as he can never occupy f6 or g6 with his king, since Black can always harass the king with his knight. Therefore the only hope is to play the king round to d6, but then Black can use his b-pawn to save the game: 6 ♔f5 (or 6 ♔g6 ♘f4+ 7 ♔f6 ♘xe6 8 ♔xe6 ♔h7 9 ♗g7 b3 10 ♔f5 b2) 6...♔h7 7 ♗g7 b3 8 ♔g5 (8 ♔e4 ♘e7 followed by ...b2 draws) 8...♘e7 and White is not making progress.

2 ♗a1?

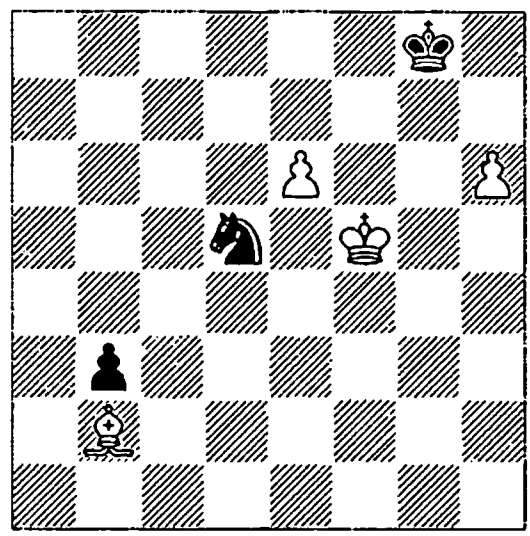
Now Black can establish a draw similar to the previous note. The winning line runs 2 ♗xb4+! ♔e6 3 ♗c3 (there is even an alternative win by 3 ♗d6 ♔f5 4 ♗c7! ♔g4 5 ♗d8! and now 5...♔f5 6 ♗f6 ♔g4 7 ♗g5 ♘e6 8 ♗d2 ♔f5 9 ♔h7 followed by h6 wins, while after 5...♘xh5 6 e6 ♔f5 7 e7 ♘f6 8 ♔g7 ♔e6 9 ♔f8 ♘d7+ 10 ♔g8 ♘f6+ 11 ♔g7 ♘e8+ 12 ♔f8 ♘f6 13 ♗c7! ♘h7+ 14 ♔e8 ♘g5 15 ♗f4 ♘e4 16 ♔d8 ♘f6 17 ♗g5 the pawn promotes) 3...♔f5 4 ♗b2! (a waiting move) 4...♔g4 5 ♗c1 ♘xh5 6 ♔g6! (Zapata only considered 6 e6?, after which Black draws by 6...♘f6 7 ♔g6 ♘d5; the king move is much stronger because it prevents both ...♔f5 and ...♘f6 and it takes only a glance to see that Black doesn't have a constructive move) 6...♘g3 7 e6 ♘f5 8 ♗g5 ♘d6 9 e7 ♔f3 10 ♗c1 ♔e4 11 ♗a3 ♘e8 12 ♔f7 ♘c7 13 ♗d6 and the pawn promotes.

2...♔f7

Now it's a draw and Black makes no mistakes from here on.

3 ♔g5 ♘e6+ 4 ♔f5 ♘g7+ 5 ♔g4 ♘e6 6 ♗b2 b3 7 ♔f5 ♘g7+ 8 ♔g5 ♘e6+ 9 ♔g4 ♔g8 10 ♔f5 ♘g7+ 11 ♔g6 ♘e6 12 h6 ♘f4+ 13 ♔f5 ♘d5 14 e6 *(D)*

B



Now we have basically the same position as in the note to Black's first move (which makes it strange that Zapata considered that line to be lost for Black). White cannot make progress.

14...♔h7 15 ♗c1 ♘e7+

15...b2 16 ♗xb2 ♔xh6 17 ♔e5 ♘e7 18 ♗a3 ♘c8 also draws.

16 ♔e5 ♔g6 17 ♔d4 ♘f5+ 18 ♔c3 ♘xh6 19 ♗xh6 ♔f6 ½-½

Summary:

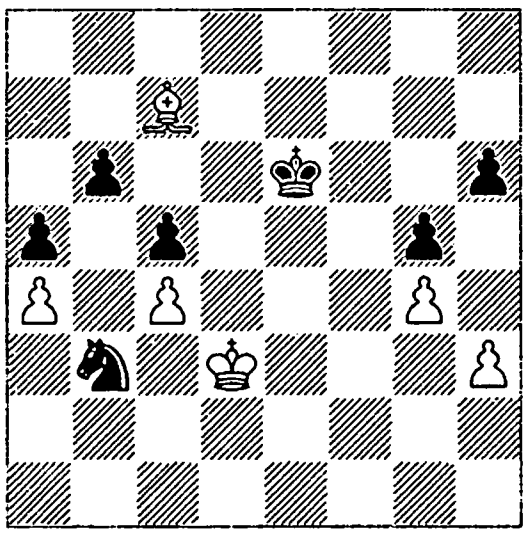
- ♗+2♙ vs ♘ is generally won, but there are some drawn positions in which the pawns are on the same-coloured squares as the bishop and are blockaded by the king and knight.
- In some cases zugzwang can be used to lift the blockade and win, but whether this is possible depends on the precise position.

6.2.3 Positional Advantage

In this section we consider various positional advantages for the side with the bishop. Even without a passed pawn, the bishop usually has an advantage if there are enemy pawns subject to attack on both sides of the board.

The position in the diagram overleaf looks very poor for Black. True, he is temporarily a pawn up, but the b6-pawn is doomed. After this is taken, Black's other queenside pawns come

B



Alexandrova – Bereziuk
Minsk 1996

under threat because White can easily dislodge the knight by ♔c3. It doesn't help Black's cause that his kingside pawns are also stuck on dark squares and subject to attack by White's bishop. Objectively speaking, Black's position is lost, and in this case it is usually better to try to mix things up and create complications rather than go down without a fight.

1...b5!?

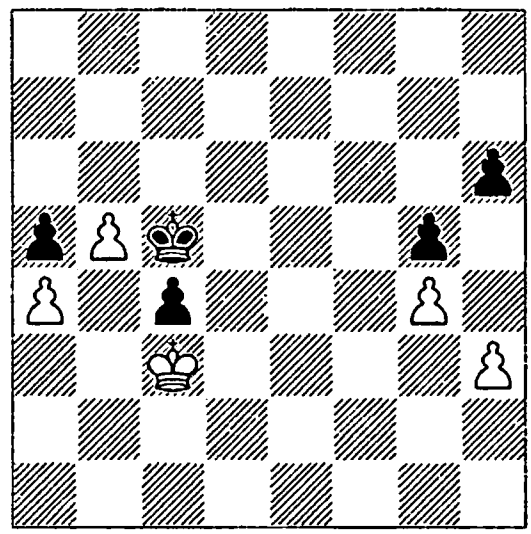
Definitely the best practical chance, and clearly better than a line such as 1...♔d7 2 ♗xb6 ♔c6 (2...♔d6 3 ♗d8 ♔e5 4 ♔c3 is also winning for White) 3 ♗d8 ♔d7 4 ♗f6 followed by ♗g7, when White is winning as Black's knight is effectively trapped and cannot do anything to help defend the vulnerable kingside pawns. Although the move played is best, it is not as effective as Bereziuk supposed, since his *Informator 66* notes indicated that he believed Black can draw against any continuation by White. As we shall see, this is not so. Both players (White in the game and Bereziuk afterwards) overlooked a key point which is instructive as it is a type of mistake that occurs rather often.

2 axb5?

Black's breakthrough plan meets with an early success and causes White to go wrong straight away.

2 cxb5! is correct; after 2...♔d5 3 ♗b6! (3 b6? c4+ 4 ♔c3 ♘c5 is fine for Black) Black is in zugzwang and must push his pawn since 3...♔d6 4 ♔c3 ♘d4 5 ♔c4 is hopeless for him. Thus he has to play 3...c4+ with the natural continuation 4 ♔c3? ♘c5! 5 ♗xc5 ♔xc5 *(D)*.

W



This position is drawn, as Black can always maintain the correspondence. The first point to note is the obvious zugzwang with ♔c3 vs ♔c5. If Black is to move, he must play ...♔d5, but then White wins with b6. The next zugzwang is with ♔e3 vs ♔d5. Black to play loses since ...♔c5 is met by ♔e4 and ...♔e5 by b6. Now consider ♔d2 vs ♔d6. If Black is to play, ...♔c5 loses to ♔c3, ...♔e6 fails to ♔c3 followed by b6, and finally ...♔d5 loses to ♔e3. When White's king is on c2, Black must be ready to meet ♔c3 by ...♔c5 and ♔d2 by ...♔d6, so his king must be on d5. Similar logic gives us the further zugzwang ♔b2 vs ♔d6. It turns out that Black can always match White's king manoeuvres and so the position is a draw. Here are some lines: 6 ♔c2 ♔d5! (but not 6...♔d6? 7 ♔d2!, when 7...♔e6 8 ♔c3 ♔d5 9 b6 ♔c6 10 ♔xc4 ♔xb6 11 ♔d5 and 7...♔d5 8 ♔e3 ♔e5 9 b6 ♔d6 10 ♔d4 are winning for White) 7 ♔c1 (after 7 ♔b2 ♔d6! or 7 ♔d2 ♔d6! 8 ♔e3 ♔d5 9 ♔f3 ♔e5 10 ♔e2 ♔e6! White is not making progress) 7...♔e6! 8 ♔d1 ♔e5! 9 ♔e2 ♔e6 and again White cannot achieve anything.

All this appears convincing, so where's the win? The answer is that White must lose a tempo **before** the minor pieces are exchanged. Then White will be in a position to put Black in zugzwang when the bishop and knight disappear. Now the win should be clear: White plays 4 ♔c2! and then Black cannot play 4...♘c5 due

to 5 ♗xc5 ♔xc5 6 ♔c3 ♔d5 7 b6 and White wins. Thus Black has to try something else, but having been deprived of his main drawing idea, his situation rapidly becomes hopeless; for example, 4...♔e4 5 ♗g1 ♔d5 6 b6 ♔c6 7 ♗e3 ♔b7 8 ♔c3 ♘a1 9 ♔xc4 ♘c2 10 ♗d2 ♔xb6 11 ♔d3 ♘a3 (11...♘b4+ 12 ♗xb4 axb4 13 ♔c4 ♔a5 14 ♔b3 is also a win for White) 12 ♗c1 ♘b1 13 ♔c2 and the knight falls.

2...a4

Black's passed a-pawn should provide sufficient counterplay to draw.

3 ♔c3

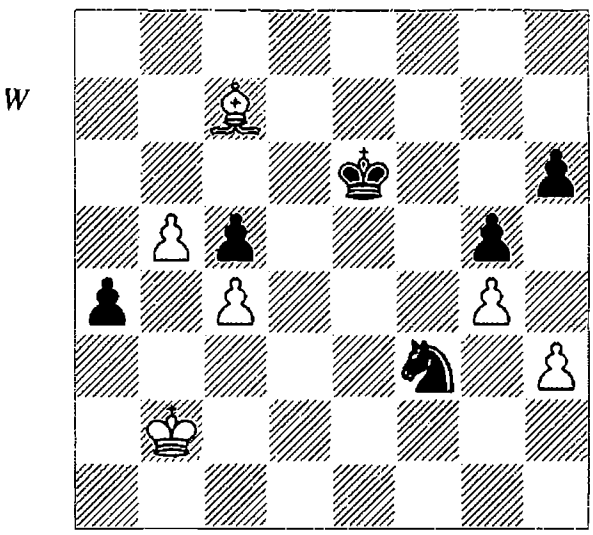
The only winning chance, as 3 b6 ♘a5 gives White no advantage.

3...♘d4?!

This is inaccurate but not yet fatal. 3...♔d7! was the best way to reach a draw, based on a surprising idea: 4 ♗e5 ♘a5 5 ♗g7 ♔e7 6 ♗xh6 ♔f6 7 ♗f8 ♘b7, sealing in the white bishop, after which Black can force a draw by repetition with ...♔f7 and ...♔g6.

4 ♔b2 ♘f3? *(D)*

But this is a serious error which goes unmentioned by Bereziuk. Black could still have held on by 4...♘b3! 5 ♔a3 ♘d2 6 ♔xa4 ♘xc4 and White's advantage is not sufficient to win.



5 ♔a3?

Missing a winning chance. 5 b6! ♔d7 6 ♔a3 is correct; after 6...♘d2 7 ♔xa4 ♔c6 (7...♘xc4 8 ♔b5 ♘d6+ 9 ♗xd6 ♔xd6 10 b7 and White wins) 8 ♔a5 ♘xc4+ 9 ♔a6 ♘xb6 10 ♗xb6 c4 11 ♗a5! ♔d5 12 ♔b5 ♔d4 13 ♔b4 c3 14 ♔b3 White rounds up the c-pawn and wins.

5...♘d2!

Now Black is back on track and secures the draw by accurate defence. 5...♘g1? loses at once to 6 ♗h2 ♘xh3 7 b6.

6 ♔xa4

6 b6 ♘xc4+ 7 ♔xa4 ♘xb6+ 8 ♗xb6 transposes to the next note.

6...♘xc4 7 ♔b3

The critical line runs 7 b6 ♘xb6+! 8 ♗xb6 ♔e5! (not 8...♔d5?, which loses to 9 ♔b5 ♔e4 10 ♔xc5! ♔f3 11 ♔d4 ♔g3 12 ♔e4 ♔xh3 13 ♔f3 ♔h4 14 ♗f2+ ♔h3 15 ♗g3!) 9 ♗xc5 ♔f4 10 ♗f8 ♔g3 11 ♗xh6 ♔xh3 and all White's pawns disappear.

7...♔d5

Now Black defends comfortably.

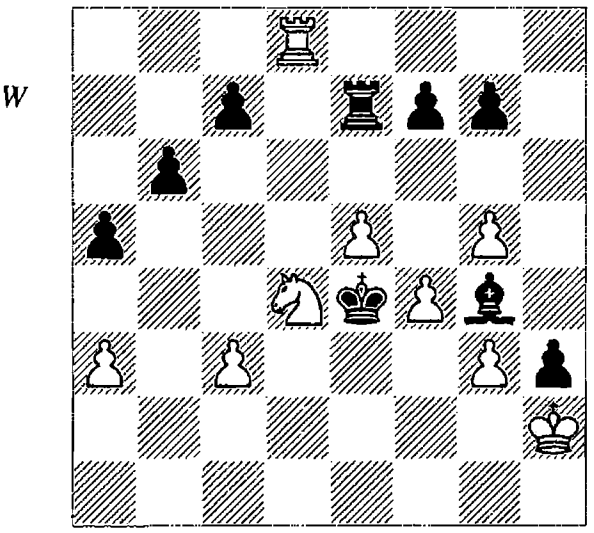
8 ♔c3 ♘a3 9 b6 ♘b5+ 10 ♔d2 ♘d6

10...♔c6 11 ♗d8 ♘d4 12 ♔d3 ♘e6 13 ♗f6 ♔xb6 14 ♔c4 ♔c6 15 ♗e7 is also drawn.

11 ♔c3 ♔c6 12 ♗xd6 ½-½

The finish might be 12...♔xd6 13 ♔c4 ♔c6 14 b7 ♔xb7 15 ♔xc5 ♔c7 with a clear draw.

The following position demonstrates the strength of an active centralized king in bishop vs knight situations.



Vogt – McShane
Bundesliga 2005/6

Material is equal, but Black has an advantage in the form of a very active king.

1 ♘c6?

White wrongly assesses the exchange of rooks which follows. After 1 ♘b5 it is not so easy for Black to make progress.

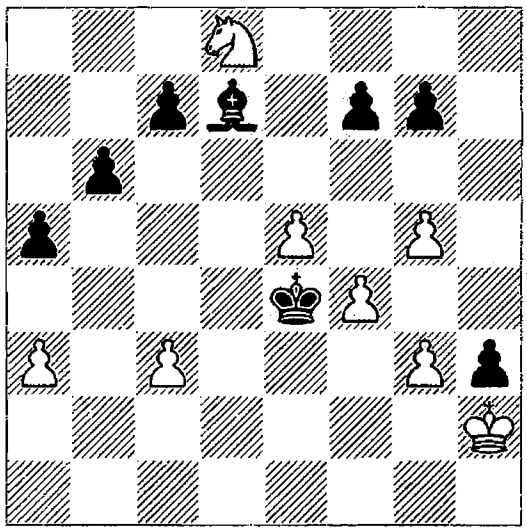
1...♖d7!

The disappearance of the rooks has two negative effects for White. Firstly, the black king can now cross the d-file to attack White's queenside pawns, and secondly the knight is left to fight on both wings by itself, a task which proves beyond it.

2 ♖xd7 ♗xd7

Material is equal, but White can win the f-pawn by ♘d8. However, Black's queenside majority, supported by his active king and bishop, is so strong that even this should not save White.

3 ♘d8 *(D)*



White must go for the pawn; otherwise he doesn't have any material to compensate for Black's positional advantage.

3...♔d5!

Black has other routes to victory, but this is the clearest. Here are some alternatives:

1) 3...g6? 4 c4! (not 4 ♘xf7? b5 5 ♘d8 ♔d5 6 ♘b7 a4 and Black's queenside pawns will decide the game) 4...♗e8 (4...♔d4?! 5 ♘xf7 ♔xc4 6 ♘h8! is also unclear) 5 ♔xh3 ♔d4 6 e6 is unclear.

2) 3...b5 is an effective move, although a little more complicated: 4 ♘b7 (or 4 g6 fxg6 5 e6 ♗e8 6 e7 ♔d5 7 ♔xh3 c5 8 ♘b7 a4 9 g4 c4! followed by ...b4 and Black wins) 4...♔d5 5 ♘xa5 ♗c8 (the threat is simply ...c5-c4 followed by ...♔c5-b6) 6 ♔g1 (6 ♘b3 ♔c4 7 ♘d4 c5 8 ♘c6 ♔xc3 9 ♘e7 ♗d7 wins for Black) 6...c5 7 ♔h2 c4 8 g4 g6 9 ♔xh3 ♔c5 10 f5 gxf5 11 e6 fxg4+ 12 ♔g3 ♗xe6 13 ♘b7+ ♔c6 14 ♘d8+ ♔d6 and again Black wins.

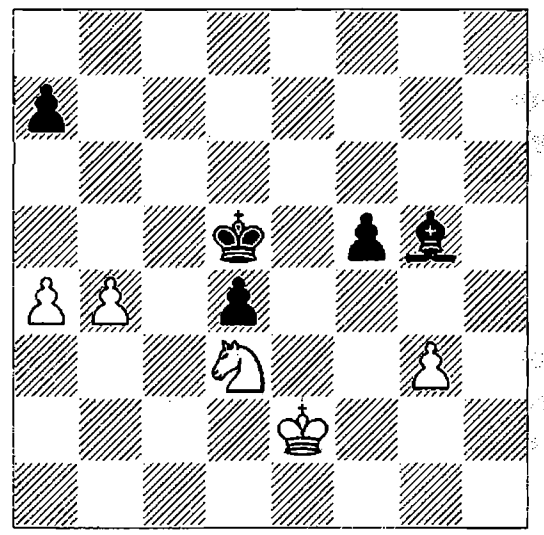
4 ♘xf7 b5 5 ♘d8

Karsten Müller analyses 5 ♘h6 in MegaBase, but doesn't mention the obvious 5...gxh6 6 gxh6 ♗f5 7 g4 ♗h7, which wins straight away.

5...c5 6 ♘b7 b4 7 cxb4 cxb4 8 axb4 axb4 9 ♘a5 ♗g4 0-1

Black will win the knight for the b-pawn, after which White is doomed by the blockade of his kingside pawns.

In the following position Black has an advantage due to his active king and the unbalanced pawn-structure. However, the limited material gives White some hope of a draw.



Suttles – Tal
Hastings 1973/4

This is an interesting example of play with a bishop against a knight. It was analysed by Minev in *Informator 17* (basically the same analysis appears in the *Encyclopaedia of Chess Endings*) and was given in Tal's own book *The Life and Games of Mikhail Tal* (reissued by Cadogan, 1997). It has been used as a model example of play with bishop vs knight (or with two bishops against two knights, as occurred earlier in the game), for example in *Exploring the Endgame* by Peter Griffiths (A. & C. Black, 1984). In none of the above sources was there any indication of inaccurate play and all considered the endgame winning for Black throughout. Certainly Black is better since he controls more space and his bishop is more useful than White's knight, which is restricted to blockading Black's passed d-pawn. Moreover, Black's king may

penetrate to c4 to attack the queenside pawns, while the g3-pawn is a target for Black's bishop. However, Black must continue accurately in view of the limited amount of material left.

1...♗e7?

A mistake allowing White to generate counterplay by advancing his queenside pawns. 1...♔c4? 2 b5! is bad for the same reason. The correct line is 1...♗d8!, which effectively prevents White from playing both b5 and a5. After 2 ♘b2 (or 2 a5 ♗c7 and Black wins the g3-pawn without allowing White to create a passed pawn on the queenside; 2 b5 ♗c7 and 2 ♘f2 ♔c4 3 b5 ♗c7 are also bad for White) 2...♗c7 3 ♔f3 ♗b8! White is in zugzwang; for example:

1) 4 b5 ♗c7 and White's queenside pawns are stuck so he must give way.

2) 4 a5 ♗c7 is the same as line 1.

3) 4 g4 fxg4+ 5 ♔xg4 ♔e4 6 ♔h3 ♔f3! 7 ♔h4 ♗d6 8 b5 ♗e7+ 9 ♔h5 ♗b4 10 ♔g5 ♔e2 followed by ...d3, winning.

4) 4 ♔f2 ♗d6 5 ♘d3 (5 b5 ♔c5) 5...♔c4 and White loses his b-pawn.

2 b5

White takes his chance to advance his queenside pawns. 2 ♔d2? is wrong and loses after 2...♗d6 3 ♘f4+ ♗xf4+ 4 gxf4 ♔c4 5 b5 ♔b4 6 ♔d3 ♔xa4 7 ♔xd4 ♔xb5 8 ♔e5 a5 9 ♔xf5 a4 10 ♔e6 a3 11 f5 a2 12 f6 a1♕ 13 f7 ♕a3.

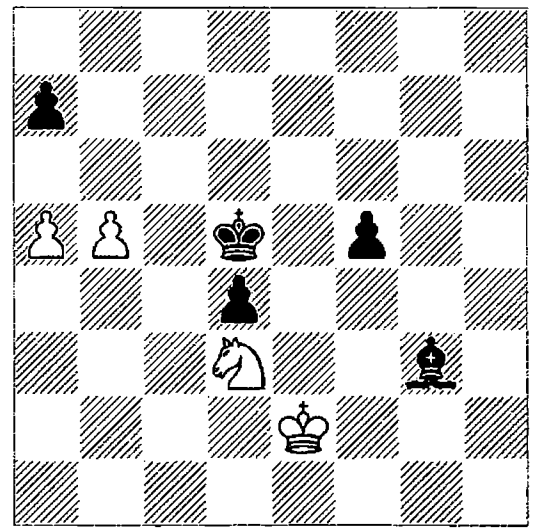
2...♗d6

It is too late to play 2...♗d8 since 3 ♘b4+ followed by ♘c6 gives White counterplay.

3 a5!

Correctly giving up the g-pawn for the sake of counterplay. After 3 ♔f2? ♔c4 White's queenside pawns cannot advance and Black wins easily.

3...♗xg3 *(D)*



4 ♘b4+

This is adequate to draw, but an even simpler method was 4 b6! axb6 5 axb6 (curiously, Minev did not analyse this obvious capture and only considered 5 a6? ♗b8 6 ♘f4+, which loses to 6...♔c4 followed by the advance of the b-pawn) 5...♔c4 (after 5...♔c6 6 ♘c1 ♔xb6 7 ♔d3 followed by ♘b3 White wins the d-pawn and secures a draw) 6 ♔d2! ♔b5 7 b7 ♔c6 8 ♘b4+ ♔xb7 9 ♔d3 ♗e5 10 ♘c2 and again White draws comfortably.

4...♔c5

The only move; otherwise White draws at once with b6.

5 ♘c6 a6 6 ♔d3 ♗f2

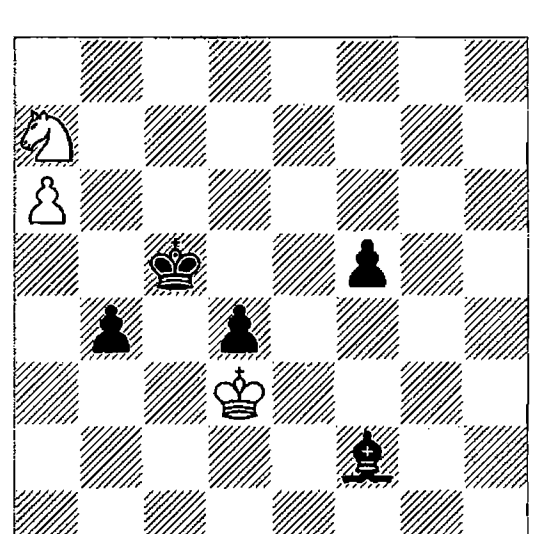
6...axb5 7 ♘xd4 f4 8 a6 ♔b6 9 ♘xb5 is even easier.

7 ♘a7

7 ♘e7 also draws: 7...♔xb5 8 ♘xf5 ♔xa5 9 ♔c4! ♔a4 (9...♔b6 10 ♘xd4 draws) 10 ♘d6 ♔a3 (10...a5 11 ♘b7 ♗e3 12 ♘c5+ ♔a3 13 ♔b5 transposes) 11 ♘e4 ♗e3 12 ♘c5 a5 13 ♔b5 (13 ♘b3? loses to 13...d3!) 13...♗d2. Minev actually reached this position in his analysis and concluded here with the 'Black is winning' symbol, but 14 ♘e6! ♗c3 (or 14...d3 15 ♘c5) 15 ♘xd4, eliminating Black's pawns, is an immediate draw.

7...axb5 8 a6 b4 *(D)*

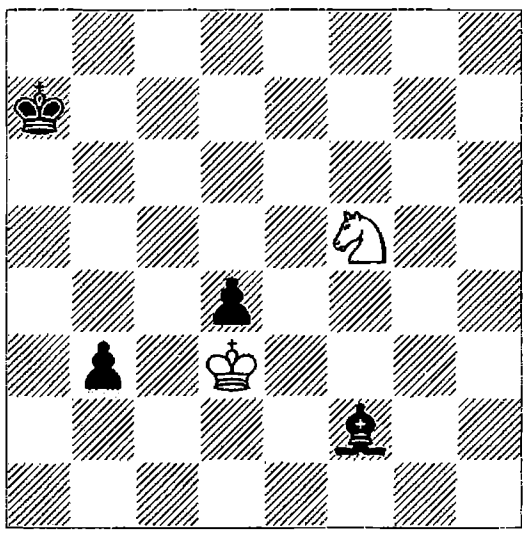
8...♔b6 9 ♘xb5 is also drawn.



9 ♘b5?

Only this move finally throws the draw away. White should have continued 9 ♘c8! ♔c6 (or else White even wins!) 10 ♘e7+ ♔b6 11 ♘d5+ ♔xa6 12 ♘xb4+ ♔b5 13 ♘d5! (the knight is heading to e7 to chase the f-pawn down the board) 13...♔c5 (13...♗g1 14 ♘e7 f4 15 ♔e4 ♗e3 16 ♘f5 followed by ♘xd4 draws) 14 ♘e7 f4 15 ♔e4 (15 ♘g6 ♗e3 16 ♘h4 ♔d5 17 ♘f3 also draws as Black cannot make progress) 15...♔c4 16 ♘c6! followed by ♘xd4 and White eliminates both black pawns.

9...♔b6 10 a7 ♔b7 11 ♘d6+ ♔xa7 12 ♘xf5 b3 *(D)*



In this case Black's pawns cannot be blockaded and he wins easily by bringing his king up to support the b-pawn.

13 ♘d6 ♔b6 0-1

This ending is usually portrayed as a smooth exploitation of the advantage of bishop vs knight in an open position, but the above analysis shows that this 'narrative' is a pale shadow of the truth.

There are two real lessons to be learnt from this example. The first is that counterplay is incredibly important for the defender; here White only lost after missing multiple opportunities to save the game by eliminating enemy pawns or by setting up a blockade. The second is that anticipating and nullifying counterplay is a key strategy for the attacker. Black could have prevented White's counterplay at the outset had he chosen the correct bishop move. At the time, the difference between ...♗e7 and ...♗d8 probably didn't appear very significant, but it could easily have changed the result of the game.

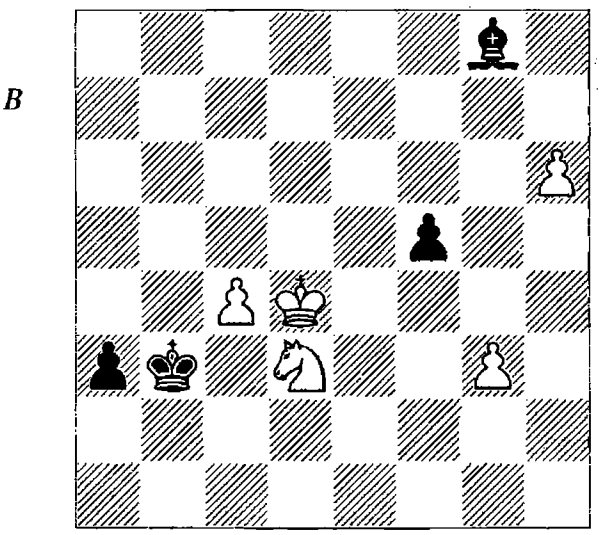
Summary:

In bishop vs knight endings, the following positional advantages can tip the balance in favour of the bishop:

- Enemy pawns subject to attack on both sides of the board.
- Active king position.
- Outside pawn-majority or, more generally, an unbalanced pawn-structure.
- Space advantage.

6.2.4 Advanced Passed Pawn

An advanced passed pawn supported by the king is very powerful and can balance a significant material deficit. The key question may be whether the defender is able to give up his knight for the pawn because if he cannot, the attacker may get a new queen rather than just winning a piece.



V. Gurevich – Lukianov
USSR 1975

Although only two moves long, the play from this position features some interesting mistakes, both in the game and in Minev's *Informator 20* analysis. The first point to note is that if White can give his knight up for the a-pawn, then he will win since Black's bishop cannot stop both the c- and h-pawns. Thus a full point may rest on White's ability to eliminate the a-pawn.

1...f4!

A good move which solves Black's problems and even forces White to continue accurately.

1...a2? is a blunder, losing to 2 ♘c1+ ♔b2 3 ♘xa2 ♔xa2 4 c5.

2 gxf4!

Minev condemned this with a double question mark, even though it's the only move to save the game. He gave 2 c5? as leading to a draw, but it loses after 2...fxg3 (2...♗h7? 3 c6 ♗xd3 4 ♔xd3! a2 5 c7 does lead to a draw) 3 ♔e3 g2 4 ♔f2 ♔c4! (curiously, Minev only gave 4...♗h7??, which loses to 5 ♘c1+ ♔b2 6 c6 ♔xc1 7 c7, when White promotes with check) 5 ♘c1 (5 c6 a2 6 c7 g1♕+ is winning for Black) 5...♔xc5 6 ♔xg2 ♔b4 7 ♔f2 ♔c3 8 ♔e2 ♔c2 9 ♘a2 ♗h7 10 ♔e3 ♔b2 11 ♘b4 ♔b3 12 ♘d3 ♗xd3 13 ♔xd3 a2 and Black wins.

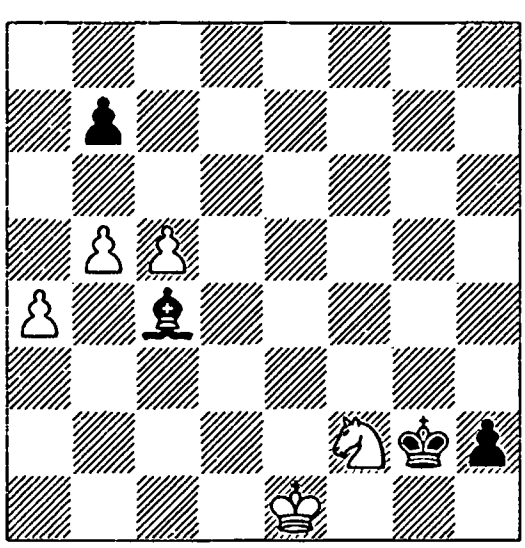
2 ♘c1+? also loses after 2...♔c2 3 ♘a2 ♔b2 4 c5 (4 ♘b4 fxg3) 4...♔xa2 5 c6 ♔b1 6 c7 ♗e6 7 h7 a2 with a skewer along the long diagonal.

2...♗h7 0-1??

At this point White rather spoiled his defensive effort by resigning in a drawn position. Minev, who considered White's position to be lost, did not comment on the resignation. The simplest saving line is 3 ♘c1+ ♔b2 4 ♘d3+ with a repetition, since Black cannot exchange on d3 when his king is on b2, blocking the long diagonal.

The worst case for the knight arises when the attacker has a rook's pawn on the seventh.

B



Pritchett – Schinzel
Dečin 1976

White is clearly in serious trouble here, as he cannot move his king or knight, so Black only needs to neutralize White's queenside pawns in order to win. The simplest way to achieve this is to pass the move to White.

1...♔g3

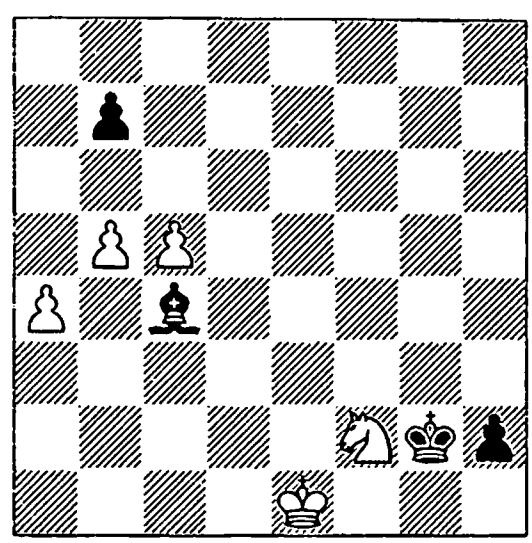
Black decides to lose a move by triangulating with his king. He could also have played the waiting move 1...♗d3, which has very much the same effect.

2 ♘h1+

White delays touching his pawns for as long as possible. 2 ♘e4+ ♔f3 3 ♘f2 ♔g2 transposes.

2...♔f3! 3 ♘f2 ♔g2 *(D)*

W



Now White has no choice.

4 c6

As an example of how easy it is to overlook a tactical point in the endgame, Minev's notes in *Informator 22* give the line 4 b6 ♗a6 5 a5 ♗b5, which looks convincing enough, but 4...♗a6? is really a blunder, allowing White to draw by the surprising resource 5 ♘h1! ♔xh1 (5...♔f3 6 ♘f2 ♔g3 7 ♘h1+ ♔g2 8 ♘f2 doesn't help) 6 ♔f2 and now it is Black who is in zugzwang; indeed, the only move even to draw is 6...♗b5!. The correct line for Black is 4...♗d5! 5 ♔e2 ♗f3+ 6 ♔e1 ♗c6 7 a5 ♗b5 8 ♘h1 ♔xh1 9 ♔f2 ♗a6, winning.

4...bxc6 5 bxc6 ♗a6 6 ♘h1

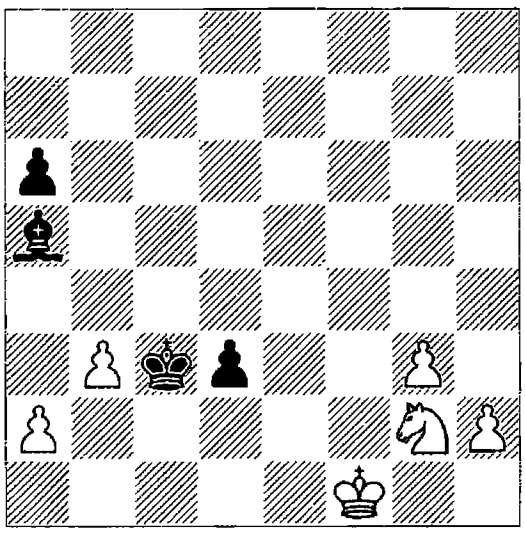
If White pushes his pawn, Black just has to repeat his triangulation until White runs out of pawn tempi; for example, 6 c7 ♔g3 7 ♘h1+ ♔f3 8 ♘f2 ♔g2 9 a5 ♔g3 10 ♘h1+ ♔f3 11 ♘f2 ♔g2 and Black wins.

6...♔xh1 7 ♔f2 ♗c4 8 a5 ♗b5 0-1

Black wins after 9 c7 ♗a6.

The defender has more chances when the pawn is on one of the central files.

B



Grigorian – Aidarov
USSR 1981

White is in serious trouble despite being two pawns ahead. Black's advanced passed pawn is supported by his king, and it hardly seems likely that White's forces will be able to stop it. Gufeld's notes in *Informator 31* correctly imply that Black is already winning, but he wrongly believed that both sides played the remainder of the game accurately. There are some lessons to be learned from the following mistakes.

1...♗b6?

Black spends a tempo preventing White's knight from moving to e3, but this mistake might have proved costly. As we shall see, Black cannot win using his d-pawn alone; the most he can achieve is to win White's knight for it. Therefore, in order to win he must make use of the a-pawn before White's kingside pawns advance too far. Time is important and so Black should have headed directly for White's queenside pawns to create a passed a-pawn as quickly as possible. 1...♔b2! was the winning move, and now:

1) 2 g4 ♗b6! (now this is a good move because the ♘e1 and ♔e2 defence doesn't work when Black's king is ready to take the queenside pawns) 3 ♘e1 d2 4 ♘d3+ (4 ♔e2 dxe1♕+ 5 ♔xe1 ♔xa2 6 b4 ♗d8 and Black wins easily) 4...♔c2 5 ♘b4+ ♔d1 is winning for Black, as in the game.

2) 2 ♘e3 ♔xa2 3 g4 ♔xb3 4 ♔g2 d2 5 g5 ♗b6 6 g6 ♗d4 and the a-pawn decides the game.

3) 2 h4 ♗b6 3 ♘f4 (Black wins after 3 ♘e1 d2 4 ♘d3+ ♔c2 5 ♘b4+ ♔d1 6 ♘d3 ♗d4 7 b4 ♔c2 8 ♘e1+ ♔b1 9 ♔e2 dxe1♕+ 10 ♔xe1 ♔xa2 because the bishop can stop the kingside pawns) 3...d2 4 ♘d3+ ♔c2 5 ♘e1+ ♔b1 6 ♔e2 dxe1♕+ 7 ♔xe1 ♔xa2 and Black wins.

2 ♘f4?

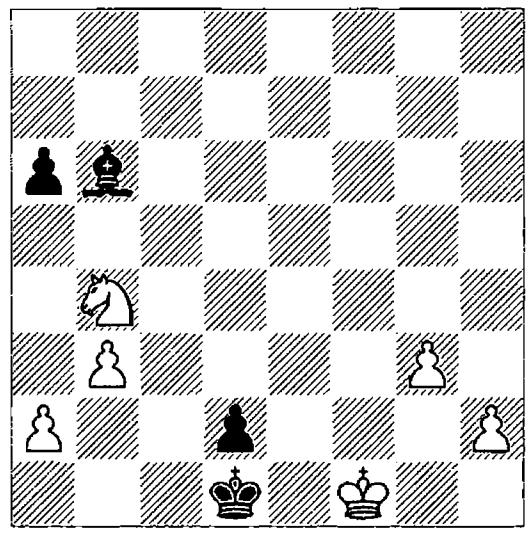
This loses time and again gives Black a winning position. The drawing method was to force Black to win the knight straight away: 2 ♘e1! (but not 2 ♔e1? losing to 2...♔c2) 2...d2 3 ♔e2 (Black is no longer able to play ...♔b2 and must capture the knight, but here White can keep one of his queenside pawns) 3...dxe1♕+ 4 ♔xe1 ♔b2 5 ♔d2 ♗g1 (or 5...♔xa2 6 ♔c3 ♗c7 7 g4 ♗xh2 8 ♔b4 ♗c7 9 g5 with an easy draw) 6 h3 ♗f2 7 g4 ♗h4 8 ♔d3 ♔xa2 9 ♔c4 ♔a3 10 ♔c5 ♗d8 11 g5 and Black's last pawn will disappear.

2...d2 3 ♘d5+

The knight has to go the long way round. After 3 ♔e2 ♔c2 Black promotes the pawn at once.

3...♔c2 4 ♘b4+ ♔d1! *(D)*

W



It looks odd to block the pawn, but this is purely temporary. Black's immediate threat is 5...♗a5 6 ♘d3 ♔c2.

5 ♘d3 ♗d4!

Taking away squares from the knight. Now Black only needs to play ...a5 followed by ...♔c2 in order to promote the pawn.

6 g4

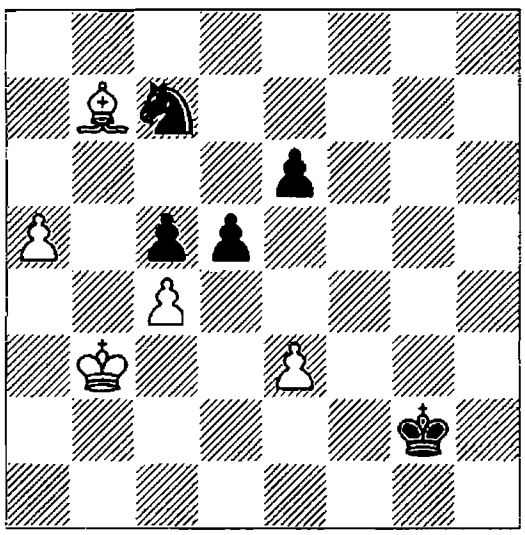
6 b4 fails to 6...♔c2 7 ♘e1+ ♔b1 8 ♔e2 dxe1♕+ 9 ♔xe1 ♔xa2 10 ♔d2 ♔b3 with an easy win.

6...a5! 7 g5 ♔c2 8 ♘e1+ ♔b1 9 ♔e2 dxe1♕+ 0-1

Black wins after 10 ♔xe1 ♔xa2.

An advanced passed rook's pawn can be very dangerous even if it is not supported by the king.

W



Lybin – Stets
Kherson 1996

This is a winning position for White. It is not so much that White can win the knight for the a-pawn any time he wishes, but more that he can improve his position first. However, there is a diabolical trap into which White fell during the game.

1 e4?

White had better possibilities:

1) 1 cxd5! (the only move according to Lybin, but although this is sufficient to win, it isn't the only method) 1...exd5 2 e4 d4 (2...dxe4 3 ♗xe4+ ♔g3 4 ♔c4 ♔f4 5 ♗h1 ♘a6 6 ♗b7 ♘c7 7 ♔xc5 ♔e5 8 ♗g2 followed by ♔c6 is a comfortable win) 3 a6! ♔f2 4 a7 d3 5 e5 c4+ (5...d2 6 ♔c2 ♔e2 7 ♗f3+ is also winning for White) 6 ♔c3 ♘b5+ 7 ♔xc4 d2 8 a8♕ d1♕ 9 ♕a2+ ♔g3 10 ♔xb5 ♕d7+ 11 ♗c6 and White wins.

2) 1 ♔c3! (defending the e3-pawn with the king, followed by ♗c8 and ♗xe6, is a comfortable win) 1...♔f3 2 ♔d3 ♔g4 (after 2...♔f2 3 ♗c8 dxc4+ 4 ♔xc4 ♔xe3 5 ♔xc5 e5 6 ♔c6 White also wins easily) 3 ♗c8 ♔g5 (3...♔f5 loses at once to 4 cxd5) 4 ♗xe6! ♘xe6 (4...d4 5 ♗c8 dxe3 6 ♔xe3 ♔f6 7 a6 and White wins) 5 cxd5 and the pawns cannot be stopped.

1...dxe4?

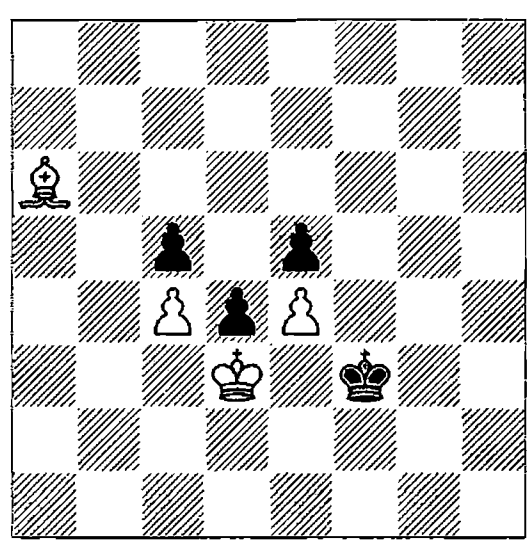
Black throws away the chance he was unexpectedly given. He could have drawn with the startling move 1...d4!, aiming to give up the knight for the a-pawn and reach a positional draw with just one pawn for the piece. White can try:

1) 2 a6? ♔f2! 3 a7 d3 4 ♔c3 ♔e2 even wins for Black.

2) 2 e5+ (trying to prevent Black from setting up a blockade with ...e5 is risky) 2...♔f2 3 ♔c2 ♔e2 4 ♗e4 ♔e3 5 ♗b7 d3+ 6 ♔d1 ♔d4 and Black is certainly not worse.

3) 2 ♔c2 e5! 3 a6 (there is no advantage in delaying this) 3...♘xa6! 4 ♗xa6 ♔f3 5 ♔d3 *(D)* and White cannot win despite his extra material.

B



5...♔f2 6 ♗b5 ♔f3 7 ♗e8 ♔f2 8 ♗h5 ♔e1 (when the white king is on d3, Black always has a tempo move since his king can occupy e1 or f2) 9 ♗g4 ♔f2 10 ♔d2 ♔f1 11 ♗h5 ♔f2 (now the king oscillates between f1 and f2) 12 ♗e2 (Black finally has to give way with his king, but it doesn't help White) 12...♔g3! 13 ♔e1 (or else ...♔f2 again) 13...♔f4 14 ♗d3 ♔e3 15 ♗b1 ♔f3 and now the king has e3 and f3 available so White is still unable to make progress. A remarkable positional draw.

2 ♗xe4+

Now White is again back on track.

2...♔f2

2...♔g3 3 ♗b7 is similar.

3 ♗b7?!

Committing the bishop to b7 makes the win much more difficult. After 3 ♔c3! ♔e2 (3...♔e3 4 ♗b7 e5 5 a6 wins at once for White) 4 ♗c6 e5 5 ♗b7 Black falls into zugzwang straight away, since 5...♔e3 loses to 6 a6.

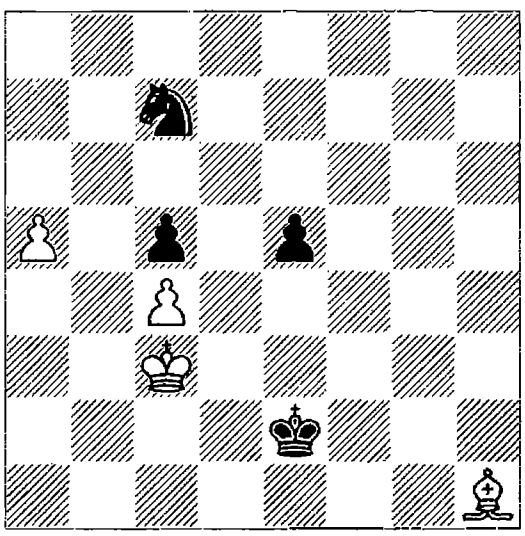
3...e5 4 ♔c3 ♔e2

4...♔e3 5 a6 and White wins.

5 ♗h1 *(D)*

With the king on e2, 5 a6? only draws after 5...e4!, so first White has to pass the move to Black.

B



5...♘a6

Black could have put up more resistance by 5...♔e3, when White must still manoeuvre for some time in order to win: 6 ♗c6 e4 7 ♗b7 ♔f4 (7...♔f3 8 ♔d2 ♘a6 9 ♔e1 transposes) 8 ♔d2 ♔f3 9 ♗c6 (White cannot play 9 ♔e1 at once due to 9...♔e3, so first he must pass the move to Black) 9...♘a6 10 ♗d5 ♘c7 11 ♗b7 ♘a6 12 ♔e1 (now Black's knight is attacked so he has no time for ...♔e3) 12...♘c7 (12...♘b4 13 a6 ♘xa6 14 ♗xa6 ♔e3 15 ♗b7 and White wins) 13 a6 ♔e3 14 a7 (advancing the pawn to a7 is a success, but now White must again manoeuvre with his bishop) 14...♔d4 15 ♗d5 ♔d3 16 ♔f2 (forcing Black to push his e-pawn) 16...e3+ 17 ♔e1 e2 (now White must pass the move to Black again) 18 ♗e6 ♔e3 (18...♘a8 19 ♗f7 ♘c7 20 ♗d5 is the same) 19 ♗f7 ♔d3 20 ♗d5 (the final zugzwang; Black must make a concession) 20...♔e3 and 21 a8♕ wins now that the c4-pawn is not under attack.

6 ♗c6 ♘b4

6...♘c7 7 ♗b7! is zugzwang.

7 ♗b7 ♘a2+

Giving way with the king by 7...♔f2 allows 8 ♔d2 followed by ♔e3, so Black has no choice.

8 ♔b3 ♘b4 9 ♔a4

The time gained enables White to win by advancing his king.

9...♔d3 10 ♔b5 e4 11 ♔xc5 e3 12 ♗f3 ♘a6+ 13 ♔b6 ♘b8 14 c5 ♘d7+ 15 ♔b5 ♘e5 16 ♗h5 1-0

Summary:

- An advanced passed pawn supported by the king is so strong that it can outweigh a material deficit of one or even two pawns.
- Winning the knight for the pawn straight away may not be the best course, as it is often possible to manoeuvre and extract even more value from the pawn.
- The knight has special problems when faced by an advanced rook's pawn.
- Zugzwang is often an important weapon for the attacker.

6.3 The Knight Has the Advantage

Factors favouring the knight include:

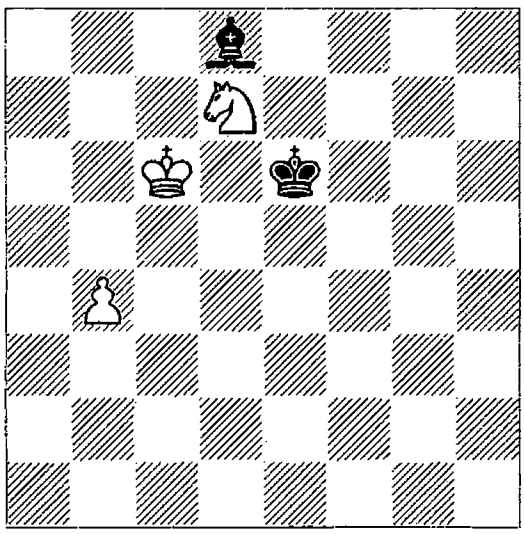
- The pawn-structure (and particularly the centre) is blocked.
- The bishop is 'bad', that is, obstructed by its own pawns.
- The side with the bishop has no passed pawns.
- The knight can occupy active squares from which it cannot easily be expelled.
- The knight is good at slow manoeuvring, so it prefers positions in which there is no active counterplay.

As before, factors which are not specific to this type of ending, such as an active king position and a space advantage, can also play a part.

6.3.1 Extra Pawn

Exploiting an extra pawn is generally more troublesome if you have the knight. A bishop can support a passed pawn and have an influence elsewhere on the board, but the short-range knight finds this more difficult. Even in the simplest case of one pawn against none, the winning chances with ♘+♙ vs ♗ are much less than with ♗+♙ vs ♘. However, there are prospects of a win in favourable situations.

W



Gelashvili – Sriram
Nikea 2006

This position is a draw, but care is always necessary when there are reciprocal zugzwangs about.

1 ♘c5+ ♔e5?

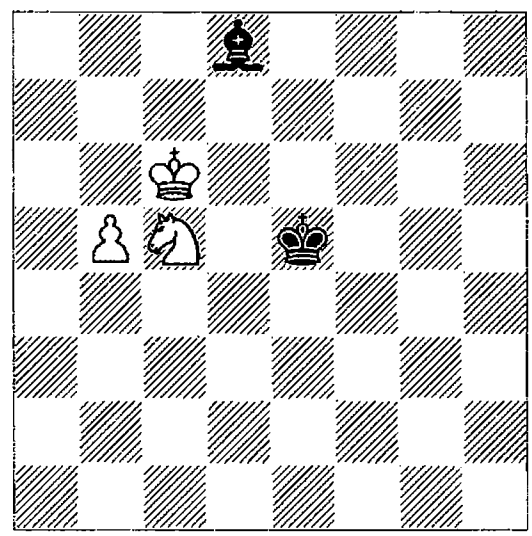
Surprisingly, this natural move loses because after White plays b5, a position of reciprocal zugzwang arises with Black to play. There were two ways to draw:

1) 1...♔f5! 2 b5 ♔e5 (now it is White to play in the reciprocal zugzwang) 3 ♘b7 (the only reasonable try since 3 ♔d7 ♔d5 is an easy draw) 3...♗f6! (it is remarkable that this move, which does not appear very natural, is the only one to draw; 3...♗h4? loses to 4 b6 ♔e6 5 ♘c5+ ♔e7 6 ♘e4 and the bishop cannot stop the pawn, while 3...♗g5? 4 b6 ♔e6 5 ♘d6 ♗f4 6 ♘b5 ♔e7 7 ♘c7 is decisive because 7...♔d8 runs into the fork 8 ♘e6+) 4 b6 ♔e6 5 ♘c5+ (5 ♘d6 ♗e5 6 ♘b5 ♔e7 7 ♘c7 ♔d8 is also a draw) 5...♔e7 6 ♘d3 ♗h4! 7 ♔c7 ♗g3+ 8 ♔c8 ♔d6 9 b7 ♔c6 and Black defends.

2) 1...♔f7! 2 b5 ♗a5 is an alternative drawing plan; after 3 ♘b7 ♗d2! (but not 3...♗e1? 4 b6 ♔e7 5 ♘d6 ♗g3 6 ♘f5+ and Black's bishop is on the wrong square) 4 b6 ♔e7 5 ♘d6 ♗f4 Black holds on.

2 b5 *(D)*

B



Now Black is on the wrong side of the reciprocal zugzwang.

2...♔f5

Or:

1) 2...♗a5 3 ♘b7 ♗c3 4 b6 ♔e6 5 ♘c5+ ♔e7 6 ♘d3! (6 b7? ♗e5 7 ♘a6 ♔d8 is only a draw) makes it hard for the bishop to stop the pawn and White wins after 6...♗d4 7 b7 ♗a7 8 ♔c7 ♔e6 9 ♘b4 ♗c5 10 ♔c8 ♗d6 11 ♘a6 followed by ♘c7+.

2) 2...♔f6 blocks in the bishop and allows White to win by 3 ♘b7! ♗e7 4 b6 ♔f5 5 ♘d6+ ♔e6 6 ♘b5 ♗h4 7 b7 ♗g3 8 ♘c7+.

3) 2...♗h4 3 b6 ♗g3 4 b7 ♔f5 5 ♘a6 and ♘c7 wins easily.

3 ♘b7! ♗h4

3...♗f6 is more of a test as White can only win with the tricky 4 ♔d5! (4 b6? ♔e6 transposes into the analysis of 1...♔f5! above) 4...♗h4 5 b6 ♗f2 6 ♘d6+ ♔g6 7 b7 ♗a7 8 ♔c6 ♗b8 9 ♔d7 ♔f6 10 ♘b5 followed by ♔c8 and ♘c7.

4 b6

In this line simply pushing the pawn is sufficient.

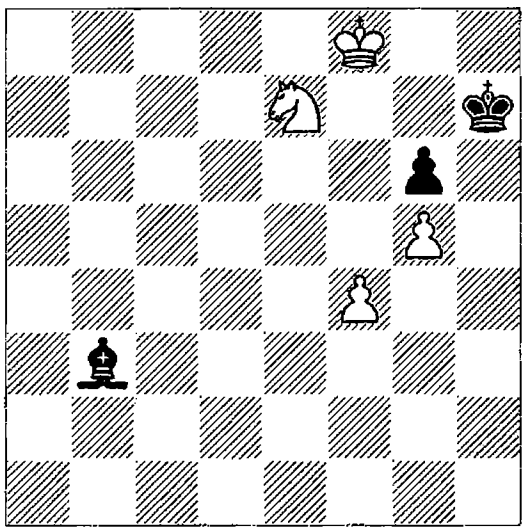
4...♗g3 5 ♘c5 ♗h2

Black must move the bishop before he can play ...♔f6.

6 b7 ♗b8 7 ♘a6 ♗a7 8 ♘c7 ♔e4 9 ♔d7 ♔d3 10 ♘b5 1-0

After 10...♗b8 White wins by ♔c8 and ♘c7.

In the next set of positions, the pawns are all in one group and not spread across the whole width of the board. Having everything in the same part of the board favours the short-range knight, but even in a very promising position the extra pawn may not be enough to win.



S. Pavlov – Sidorchuk
Kiev Ch 2008

This position looks very favourable for White; he is a pawn ahead, his pieces are actively placed and Black's bishop is 'bad' with respect to his last pawn, which means that White's king can occupy squares such as f6 and f8 with impunity. Despite this, the position is a draw provided Black defends accurately, but it only requires one small slip for Black to fall to his destruction.

There are two key defensive ideas for Black; the first is to occupy e6 with the bishop if White's knight ever reaches a square from which a move to f6 is possible. If the knight arrives on f6 while Black's bishop is on any other square, then White wins. The second important point is to watch out for a possible breakthrough by f5. This means that when White's knight is on e5, for example, Black's bishop must be on e6, c8 or h3.

The simplest plan is to keep the bishop on the a2-g8 diagonal, which prevents ♔f7 by White, and answer ♘e5 with ...♗e6. The only tricky moment arises if White plays his knight to, for example, g4, since Black must meet this by ...♗e6. Then White plays ♘e5, trying to put Black in zugzwang, but he can still play ...♗h3; the bishop always has sufficient squares to avoid zugzwang.

1...♗e6

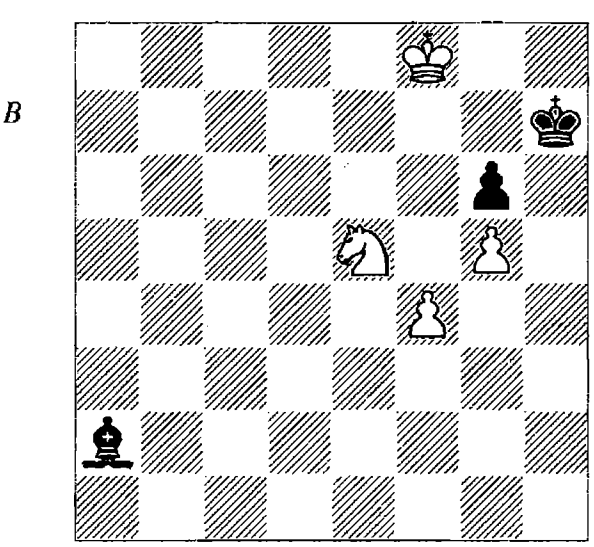
For the moment the knight is not close to f6, so Black has a little more freedom, but he must still take care; for example, 1...♗c2? loses to 2 ♘d5 ♗b1 3 ♘f6+ ♔h8 4 ♘d7, and then as in the game.

2 ♘c6 ♗a2

2...♗c4? loses to 3 f5! gxf5 4 ♘e5 ♗d5 5 g6+ ♔h6 6 g7 followed by ♘f7. However, in addition to the move played, d5, f5 and b3 are also safe squares for the bishop.

3 ♘e5 *(D)*

Transferring the king to f6 is possible but doesn't win; for example, 3 ♔e7 ♔g7 4 ♘d4 ♗c4 5 ♘e6+ ♔g8 6 ♔f6 ♗a2 7 ♘c5 ♗b1 8 ♘d7 ♗c2 9 ♘e5 ♔h7 10 ♔f7 ♗b3+ and White is not making progress.



3...♗b1?

A fatal error. 3...♗e6!, preventing f5, was the only move to draw. After 4 ♘d3 ♗a2 5 ♘c5 ♗d5 6 ♘d7 ♗e6! 7 ♘e5 ♗h3 8 ♔f7 ♗f5 9 ♔f6 ♗c2 10 ♘d7 ♔g8 White cannot make progress.

4 ♘d7

Black's bishop has lost contact with the e6-square and now he loses.

4...♗a2

Or:

1) 4...♗f5 5 ♘f6+ ♔h8 6 ♔f7 (Black is in zugzwang and must allow the knight to reach d7) 6...♗c2 7 ♘d7 followed by ♘f8, winning.

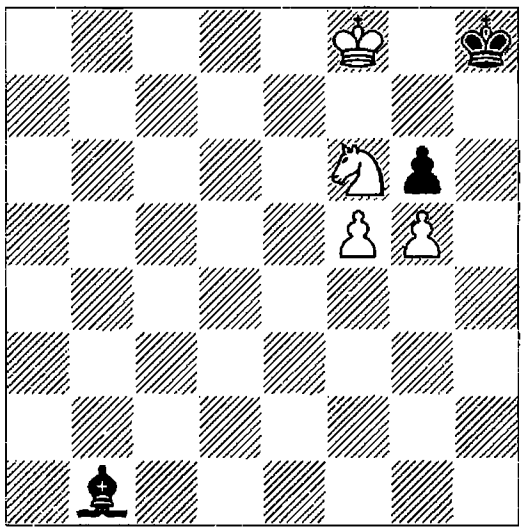
2) 4...♗c2 5 ♔f7 ♗b3+ 6 ♔f6 is decisive as Black is unable to play ...♔g8 when his bishop is not on the b1-h7 diagonal.

5 ♘f6+ ♔h8 6 f5!

Everything is set and now White makes the decisive breakthrough. Black cannot take the pawn as White mates in two by pushing the g-pawn.

6...♗b1 *(D)*

W



7 ♘e4!!

This is the beautiful point to White's play and the only move to win. White sacrifices the knight solely in order to clear f6 for his pawn.

7...♗xe4

7...gxf5 8 g6 ♗a2 9 ♘f6 and White mates next move.

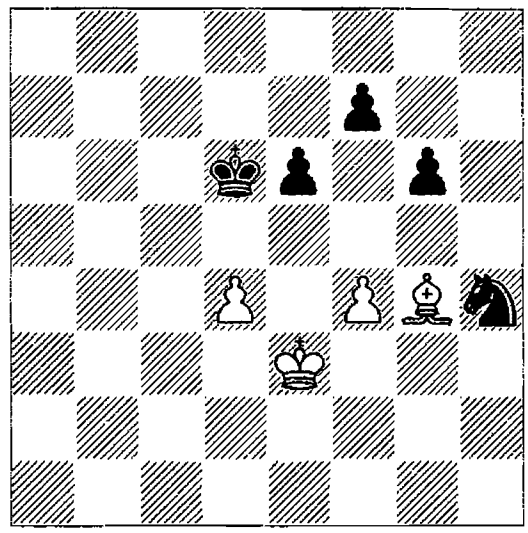
8 f6

Black will have to surrender his bishop on f7, after which the king and pawn ending will be winning for White.

8...♗d5 9 f7 ♗c4 10 ♔e7 ♗xf7 11 ♔xf7 ♔h7 12 ♔f6 ♔g8 13 ♔xg6 1-0

In the following position, two of the factors mentioned at the start of this section apply. The first is that White has no counterplay, so Black can manoeuvre as slowly as he likes, and the second is that, thanks to White's broken pawns, the knight can settle on squares such as d5 from which it cannot be driven away. Thanks to these factors, the position is winning for Black, but in the game he misplayed it.

B



Kasmiran – Irwanto
Indonesia 2002

Black has several advantages; he is a pawn up, White's remaining pawns are isolated and it is Black to move. Black won the game, and according to the notes by Irwanto and Liem in *Informator 84*, both sides conducted the remainder of the game accurately. Black is indeed winning in the diagram position, but it is not true that the game was conducted accurately; Black allowed White two drawing opportunities, both of which were missed by White (and the annotators). One of these errors was the typical one of failing to evaluate a pawn ending correctly.

1...♘g2+!

This is the best move. The plan is to transfer the knight to d5 with gain of tempo, forcing White's king to occupy f3; then ...f5 will drive the bishop back to the inactive square h3.

2 ♔f3 f5?

A blunder allowing White a saving chance. The correct continuation was 2...♘e1+ 3 ♔e2 ♘c2 4 ♔d3 ♘b4+ 5 ♔e3 ♘d5+ 6 ♔f3 f5 7 ♗h3 ♘b4! (this threatens to win the d-pawn by ...♔d5 followed by ...♘c2+ and, thanks to the poor position of White's bishop, there is little he can do to stop this) 8 ♔e3 ♔d5 9 ♗g2+ ♔c4 10 ♗f1+ ♔c3 11 ♗b5 ♘d5+ 12 ♔f3 ♔xd4 13 ♗e8 ♘e7 followed by ...e5 and Black will win with his two extra pawns.

3 ♗h3?

Missing the drawing line 3 ♔xg2! fxg4 4 ♔g3 ♔d5 5 ♔xg4 ♔xd4 6 ♔h4! (the only move to draw as it is essential to maintain the distant opposition; 6 ♔f3? ♔d3 7 ♔f2 ♔e4 8 ♔g3 ♔e3 9 ♔g4 ♔f2 and 6 ♔g5? ♔e3 7 ♔g4 ♔f2 are both winning for Black) 6...♔d3 7 ♔h3 ♔d2 8 ♔h2 ♔e2 9 ♔g2 ♔e3 10 ♔g3 and White is always able to maintain the opposition, so Black cannot win.

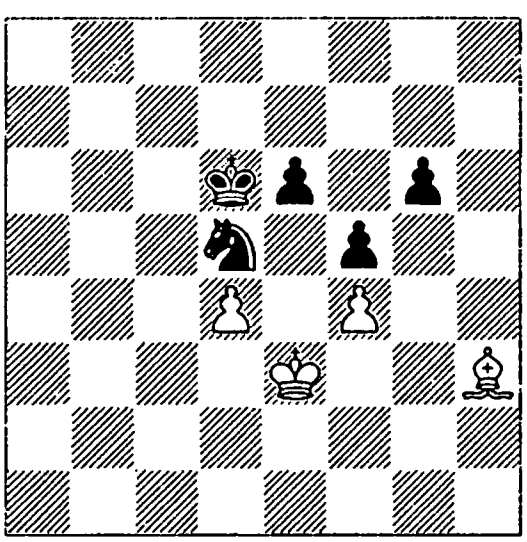
3...♘e1+

Now Black is again winning.

4 ♔e2 ♘c2 5 ♔d3 ♘b4+ 6 ♔e3 ♘d5+?! *(D)*

A step in the wrong direction; Black can win easily by 6...♔d5!, as in the note to Black's second move.

W



7 ♔f3 ♔c6?

And this move, given a double exclamation mark in *Informator*, gives White a second drawing opportunity. Black should have repeated the position with 7...♘b4 8 ♔e3 and then won by 8...♔d5!, as before.

8 ♗f1 ♔b6

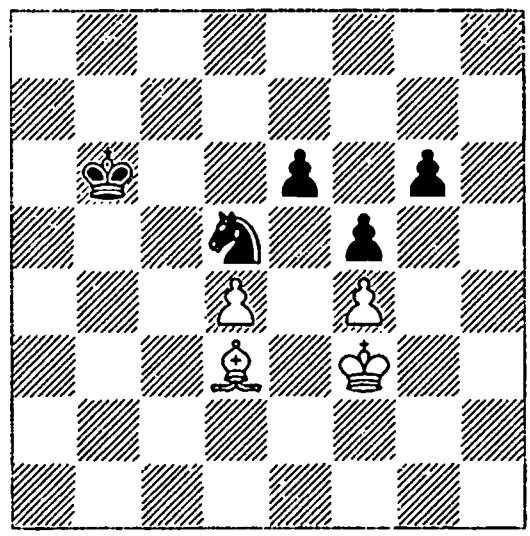
Black intends to attack the d4-pawn by ...♔a5-b4-c3, but this plan is simply too slow.

9 ♗d3?! *(D)*

This move loses a tempo, and makes the draw much harder. White also loses after 9 ♗c4? ♔a5 10 ♗xd5 exd5 11 ♔g3 ♔b4 12 ♔h4 ♔c4 13 ♔g5 ♔xd4 14 ♔xg6 ♔e4, but he could have saved the game by the counterattack 9 ♔g3! ♔a5 10 ♔h4! ♘xf4 11 ♔g5 ♘d5 12 ♔xg6 ♔b6 13 ♔f7 ♘f4 14 ♔f6 and 15 ♔e5, and Black cannot maintain his pawns.

9...♔a5 10 ♗f1?

B



This further loss of time should have sealed White's fate. His last chance to save the game was 10 ♔g3! ♔b4 11 ♗a6 ♘e7 (or 11...♔c3 12 ♗c8 ♘c7 13 ♔h4 ♔xd4 14 ♔g5 ♔e4 15 ♗d7! and Black is unable to free himself without giving up a pawn, after which White is out of danger) 12 ♔h4 ♔c3 13 ♔g5 ♔xd4 14 ♗b5! ♔e4 (14...♔d5 15 ♗e8 ♔d6 16 ♗f7 ♔d7 17 ♔f6 ♘d5+ 18 ♔e5 is also a draw) 15 ♗d7 e5 16 fxe5 ♔xe5 and Black cannot win due to the active position of White's pieces; for example, 17 ♗b5 f4 18 ♗e2 ♔e4 19 ♔g4! ♔e3 20 ♗f3! ♘f5 21 ♗d5 ♘d4 22 ♔g5 and White draws.

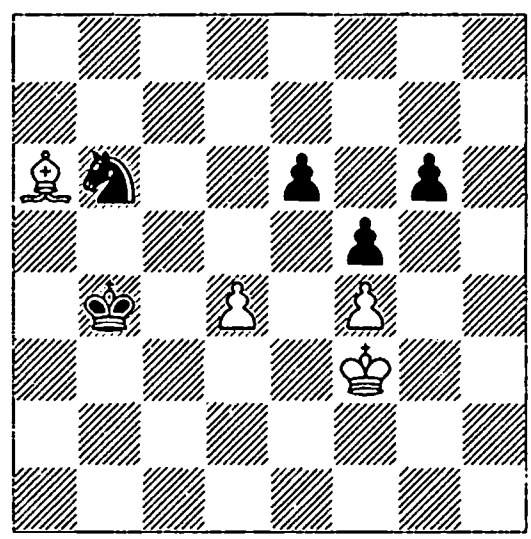
10...♔b4 11 ♗a6

It's too late to play for activity now.

11...♘b6?! *(D)*

Heading the wrong way. Black had a straightforward win by 11...♘e7! 12 ♔e3 (12 ♔g3 ♔c3 13 ♔h4 ♔xd4 14 ♔g5 ♔e4 15 ♗b5 ♘d5 is also winning for Black) 12...♔c3 13 ♗b5 ♘d5+ 14 ♔f3 ♘c7, picking up the d-pawn.

W



12 ♔e3?!

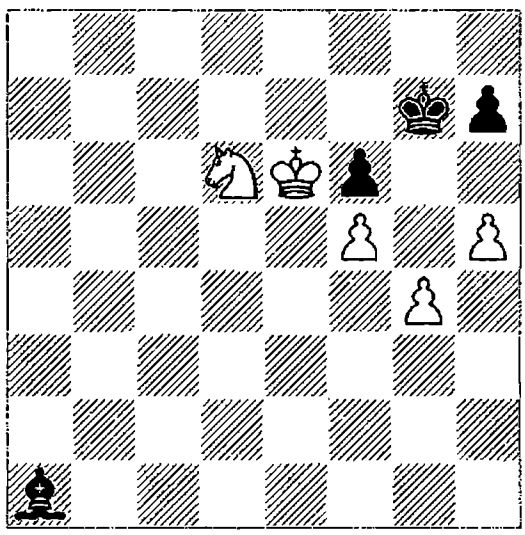
Now it's all over. White should have tried 12 ♗f1 or 12 ♗e2, when Black can only win by backtracking with 12...♘d5 13 ♗a6 and then playing 13...♘e7!, transposing to the previous note.

12...♔c3 13 ♗b5 ♘d5+ 14 ♔f3 ♔xd4 0-1

15 ♗e8 ♘e7 followed by ...e5 is decisive.

In the next position, the pawns are again all in one mass and White has several other advantages, but impatience cost him half a point.

W



Kr. Georgiev – Kyriakides
Novi Sad Olympiad 1990

White stands to win; he is a pawn up, his pieces are actively placed and Black has a weak pawn on f6. Nevertheless, the game ended in a draw in just a few moves because White, scenting victory, went to take the f6-pawn without really considering the consequences. The game finished **1 ♘e8+? ♔h6 2 ♘xf6** (it's too late to back out now because Black's king threatens to become active via g5: thus 2 ♘d6 ♔g5 3 ♘e4+ ♔xg4 4 ♘xf6+ ♔g5 5 ♘d7 ♔xh5 6 ♘e5 ♗b2 7 f6 ♗a3 and 2 ♔f7 ♔g5 3 ♔g7 ♔xg4 4 h6 ♔xf5 5 ♔xh7 ♔g5 are both easy draws) **2...♗xf6 3 ♔xf6** (stalemate) ½-½.

From the diagram, Minev, in *Informator 50*, demonstrated a convincing winning plan: **1 ♘e4!** and now:

1) 1...h6 2 ♔e7! ♗b2 3 ♘d6 ♗a3 4 ♔e6 (threatening ♘e8+) 4...♔f8 (4...♗b2 5 ♘e8+ and White wins because there is no stalemate) 5 ♘e4 and the f6-pawn falls.

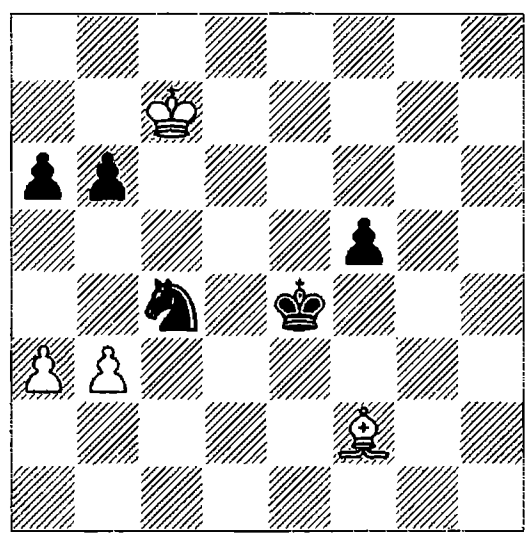
2) 1...♔h6 2 ♔f7 ♗b2 3 ♔g8 ♗e5 (to stop ♘d6; 3...♗d4 4 ♘d6 ♔g5 5 ♔xh7 ♔xg4 6 ♔g6 is easy) 4 ♘c5 ♗b2 5 ♘d7 ♗c3 (5...♔g5 6 ♔xh7 ♔xg4 7 ♔g6 and 5...♗a3 6 ♘xf6 ♔g5 7 ♔f7 ♗b2 8 ♘xh7+ ♔xg4 9 ♔g6 are also decisive) 6 ♘f8 and the h7-pawn falls.

3) 1...♗b2 (allowing White to execute his threat) 2 g5 fxg5 3 f6+ ♔h6 (3...♔f8 4 ♘xg5 also wins for White) 4 ♘g3 ♗a3 (4...g4 5 ♘f5+ ♔xh5 6 f7 ♗a3 7 ♘e7 and the white pawn promotes) 5 ♔f5! ♗d6 (5...♗b2 6 ♔g4 and White mates next move) 6 ♔g4! ♗xg3 7 ♔xg3 g4 8 ♔h4 g3 9 ♔xg3 and the f-pawn promotes.

It is worth mentioning that in addition to Minev's win, White has a much simpler route to victory: **1 g5! fxg5 2 f6+ ♔f8** (2...♔h6 3 f7 ♔g7 4 h6+ ♔f8 5 ♘e4 and White mates in a few moves, while after 2...♗xf6, 3 ♘f5+ picks up the bishop) **3 ♘e4** (threatening ♘xg5) **3...h6 4 ♘c5** followed by ♘d7+ and f7+, when the f-pawn promotes.

In the following positions the pawns are spread across the board, which gives the bishop more defensive possibilities.

B



Lukin – Gurgenidze
Telavi 1982

At first sight the position is a clear draw since after 1...♘xa3 2 ♔xb6 White picks up the a6-pawn. However, Black finds a surprising move which poses considerable problems for White.

1...b5! 2 a4

The only chance, as 2 ♔b7? ♘xa3 3 ♔xa6 b4 4 ♔a5 ♘c2 5 ♔b5 f4 6 ♔c4 ♔f3 followed

by ...♔e2 is an easy win for Black, while after 2 bxc4? bxc4 3 ♗e1 f4 4 ♔c6 ♔d3 5 ♔d5 c3 6 ♗xc3 ♔xc3 7 ♔e4 ♔b3 Black has a winning king and pawn ending.

2...b4!

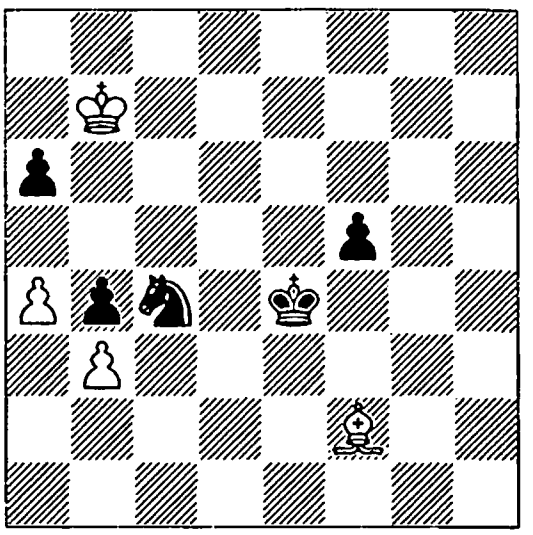
2...♘d2 3 axb5 axb5 4 ♔c6 b4 5 ♗c5 f4 6 ♗xb4 is a comfortable draw. The move played again offers the knight in order to create two separated passed pawns.

3 ♔b7!

Not 3 ♔c6? ♘d2! 4 ♗c5!? (the best chance, since 4 ♔c5 a5 and 4 ♗e1 ♔e3 5 ♔b6 ♔e2 are easily winning for Black) 4...a5 5 ♗xb4 axb4 6 a5 ♘xb3 7 a6 ♘d4+ 8 ♔b6 ♘c6! (this neat move prevents White from promoting with check) 9 ♔xc6 b3 10 a7 b2 11 a8♕ b1♕ and Black reaches an ending of ♕+♙ vs ♕. It is sometimes hard for humans to assess positions with this material. However, if you know the basic principles, many positions can be assessed fairly reliably. Here we can apply the rule that with an f-pawn, the defender can usually only draw if he can get his king in front of the pawn, or threaten to do so. It also helps to know that the f-pawn (or the c-pawn, of course) offers the best winning chances of any pawn. Since White's king is nowhere near being in front of Black's pawn, we can conclude that this position is likely to be lost except in the improbable event that White has an immediate perpetual check. The tablebase confirms this 'rule of thumb' assessment, and informs us that Black can mate in 60 moves. White was wise not to enter this position, not only because it is in fact lost (which would be hard to be sure about during a game), but also because endings with ♕ vs ♕+♙ are notoriously hard to defend in practice, so even had it been a draw, to defend it over the board would have been extremely difficult.

We now return to the position arising after 3 ♔b7! *(D)*:

B



3...a5

Other moves pose few problems:

1) 3...♘d2 4 ♔xa6 ♘xb3 5 ♔b5 ♘c1 6 ♔xb4 is drawn, since if Black risks 6...♘d3+?! 7 ♔b5 ♘xf2 then after 8 a5 the pawn cannot be stopped. Livshits and Lukin think White is winning here, but Black can still draw by either 8...♘d1 9 a6 ♘c3+ 10 ♔c6 f4 11 a7 f3 12 a8♕ f2 or, more surprisingly, 8...f4 9 a6 f3 10 a7 ♔f4! 11 a8♕ ♘e4.

2) 3...♔d3 4 ♔xa6 ♔c3 5 ♔b5 ♔xb3 6 a5! (not 6 ♗e1? ♘d6+ 7 ♔c5 ♘e4+ 8 ♔b5 ♘c3+ and Black wins) and now:

2a) 6...♘d6+ 7 ♔c6 ♘c8 8 ♔d5! (8 a6? loses to 8...♔c4! 9 ♔d7 ♔b5) 8...♔a4 9 a6 b3 10 ♗d4 ♔a5 11 ♔e5 is a draw.

2b) 6...♘a3+ 7 ♔c5 ♔a4 8 a6 ♘b5 9 ♔c4 b3 10 ♗d4 f4 11 ♔d3 draws.

2c) 6...♘xa5 7 ♗e1! (but not 7 ♔xa5? ♔c4! 8 ♔a4 b3 9 ♔a3 ♔c3 10 ♗g3 ♔c2 11 ♗e5 f4 and the pawns cannot be stopped) 7...♘c6 8 ♔xc6 f4 (8...♔c4 9 ♗xb4 draws) 9 ♔c5 f3 10 ♔b5 and Black must give up one of his pawns.

4 bxc4!

This surprising move enables White to reach a positional draw, even though his pawn is only on the fifth rank when Black promotes.

4...b3 5 ♗b6 b2 6 c5 b1♕ 7 c6

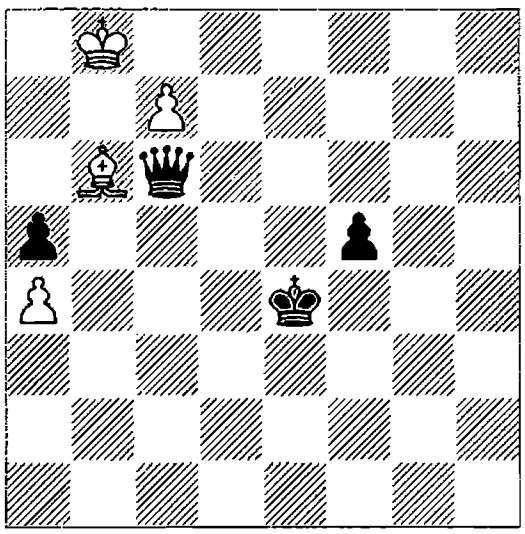
Thanks to the position of Black's king, he is unable to pin the pawn and therefore it can advance to the seventh rank. Since the bishop shields White's king from unwelcome checks, Black has to spend all his time preventing the pawn from promoting, and therefore cannot make any progress.

7...♕b3

Black has the option to gain a tempo by moving his king, but it doesn't help; for example, after 7...♔d3 8 c7 ♕h1+ 9 ♔b8 ♕h2 10 ♔b7 ♕g2+ 11 ♔b8 ♕g3 12 ♔b7 ♕g7 13 ♔b8 ♕e5 14 ♔b7 ♕d5+ 15 ♔b8 ♕c6 16 ♗a7 the king move makes no difference.

8 c7 ♕d5+ 9 ♔b8 ♕c6 *(D)*

W



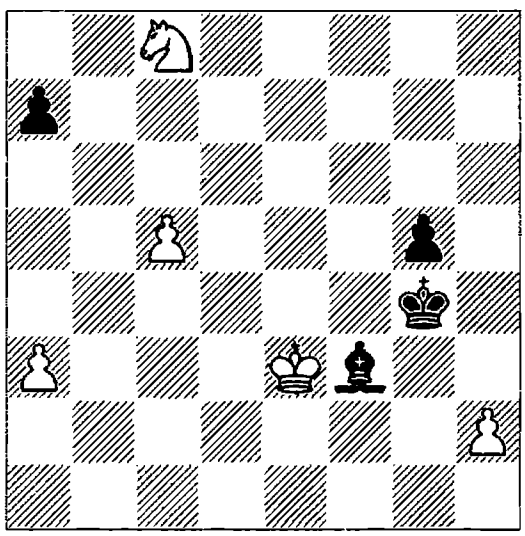
The last chance; after 10 c8♕? ♕xb6+ 11 ♔a8 ♕d4 Black would have excellent winning chances in the queen ending, but White need not give up his bishop.

10 ♗a7! ½-½

The bishop is moved to a safe square and Black has to concede the draw since he cannot force the white king in front of the pawn (checks along the b-file are met by ♔a8).

The analysis of the following position depends on a tricky ending of ♘+♙ vs ♙ (see Section 3.3 on page 144 for some similar positions).

B



Gaponenko – Sedina
USSR 1991

This position is more complex than it looks. White is a pawn up, has a passed c-pawn and is attacking Black's a-pawn, but the win is still far from easy. Black's drawing hopes lie in exchanging the kingside pawns, giving up the bishop for the c-pawn and trying to reach a drawn position with ♘+♙ vs ♙ (for example, by attacking the a4-pawn with her king). Whether this works lies on a knife-edge. Sedina and Kosikov analysed this ending in *Informator 53* and concluded that it is drawn, but White can win with a subtle manoeuvre.

1...♗a8

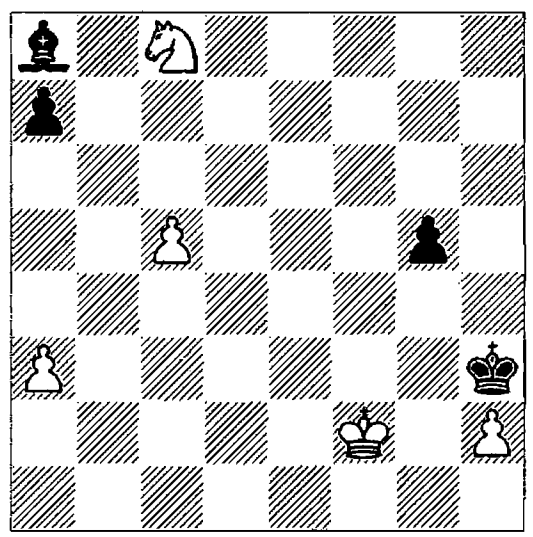
The bishop must move before Black can play ...♔h3, and this square is a good choice. The alternative plan of bringing the king back to fight against the c-pawn is hopeless; for example, 1...♗h1 2 ♔f2 ♔f5 3 ♘xa7 ♔e5 4 ♔g3 ♔d5 5 c6 ♔d6 6 ♔g4 ♔c7 7 ♔xg5 ♔b6 8 c7 ♔xc7 9 h4 with a winning position.

2 ♔f2!

It is essential to preserve the h-pawn for the moment. If White goes to promote the c-pawn immediately, then Black draws: 2 ♘xa7? ♔h3 3 c6 ♔xh2 4 c7 ♗b7 5 ♘b5 (5 c8♕ ♗xc8 6 ♘xc8? g4 actually loses for White) 5...g4 6 ♘d6 (after 6 ♘d4 g3 7 ♘f3+ ♔h3! 8 a4 ♔g4 9 ♘e5+ ♔h3 10 ♔f4 g2 11 ♘f3 ♗a6 White cannot make progress) 6...g3 7 ♘xb7 g2 8 c8♕ g1♕+ 9 ♔d2 (trying to approach the a-pawn, since otherwise Black wins the pawn with a fork) 9...♕f2+ 10 ♔c3 ♕e3+ 11 ♔b2 ♕b6+ 12 ♔a2 ♕f2+ 13 ♔b3 ♕b6+ 14 ♔a4 ♕a6+ 15 ♔b4 ♕b6+ and White cannot escape the checks without losing the a-pawn.

2...♔h3 *(D)*

W



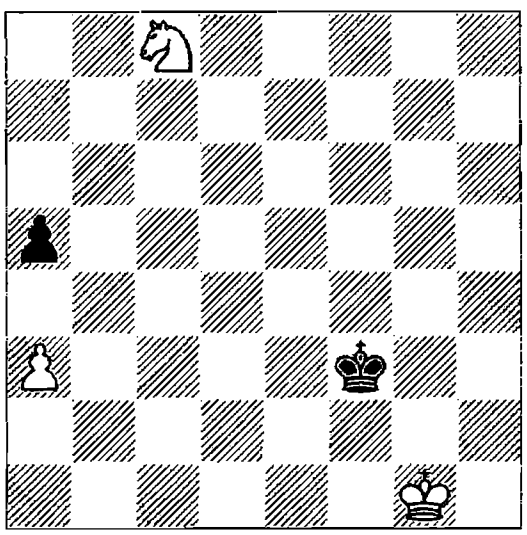
3 ♔g1

Now White threatens ♘xa7, so Black must move the a-pawn.

3...a6?!

This loses straight away because Black will need the a6-square for her bishop in a few moves. The toughest defence is 3...a5! 4 ♘e7 g4 5 c6 g3 6 hxg3 ♔xg3 7 c7 ♗b7 8 c8♕ ♗xc8 9 ♘xc8 ♔f3 *(D)* but White wins all the same, although it is surprisingly tricky.

W



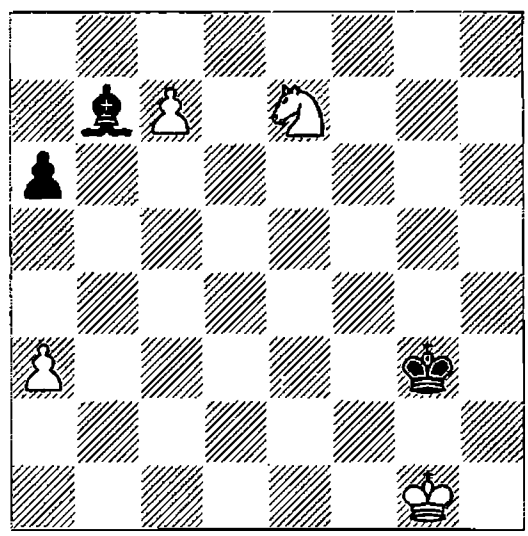
10 a4! (Sedina and Kosikov only considered 10 ♘b6?, when Black does indeed draw by 10...♔e3 11 ♘c4+ ♔d3 12 ♘xa5 ♔c3 and the a-pawn falls) 10...♔e3 11 ♔g2! (the only move to win; 11 ♔f1? ♔d4 12 ♔e2 ♔c4! 13 ♔d2 ♔b4 14 ♘b6 ♔c5 is only a draw) 11...♔e2 (the most awkward defence; 11...♔d4 12 ♔f3 transposes to the main line of this note) 12 ♘b6! (this is most accurate as it prevents ...♔e3 due to the fork on c4; after 12 ♔g3?! ♔e3 White has made no progress and only lost time) 12...♔d3 13 ♔f3 ♔d4 14 ♘c8! (this switchback is the toughest move in the winning line; for the moment White cannot effectively approach with her king, so she moves her knight to a square where Black cannot gain a tempo by playing ...♔c5 at some stage; 14 ♔f4? ♔c5 is only a draw) 14...♔d3 (14...♔d5 15 ♔e3 ♔c4 16 ♔e4 ♔b4 17 ♘b6 ♔c5 18 ♘d5 ♔c4 19 ♔e5 ♔c5 20 ♔e6 ♔c6 transposes) 15 ♔f4! ♔d4 16 ♔f5 ♔d5 17 ♔f6 (now Black cannot continue to oppose the white king and must give way) 17...♔c4 18 ♔e6 ♔b4 19 ♘b6 ♔c5 20 ♘d5 ♔c6 21 ♘c3 ♔c5 22 ♘d1! ♔b4 23 ♘b2 ♔c3 24 ♔d5 ♔xb2 25 ♔c4 and White wins. It would have been a real challenge for White to find this line if Black had selected the best defence.

4 ♘e7

Now everything is much simpler for White.

4...g4 5 c6 g3 6 hxg3 ♔xg3 7 c7 ♗b7 *(D)*

W



8 ♘f5+!

Interestingly, 8 c8♕? ♗xc8 9 ♘xc8 ♔f3! is only a draw after 10 a4 ♔e4 11 ♔f2 ♔d5 12 ♔e3 ♔c5 13 ♔d3 ♔b4 14 ♘b6 ♔a5 since the a5-square is not blocked.

8...♔f4 9 ♘d6 1-0

Thanks to the pawn being on a6, Black loses straight away.

Summary:

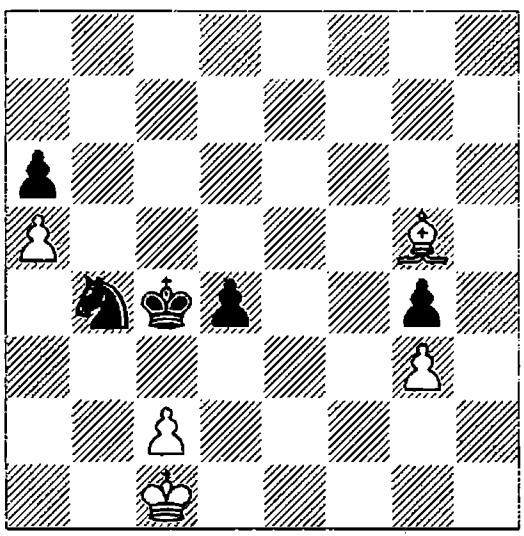
- In bishop vs knight endings, an extra pawn offers fewer winning chances when the knight has the extra pawn as opposed to the other way around.
- Factors favouring the knight include: pawns all close together, weak enemy pawn-structure and strong squares that can be occupied by the knight and from which it cannot be driven away.

6.3.2 Tricky Knight Manoeuvres

It's not only beginners who find knights hard to handle and the curious move of the knight can also perplex grandmasters. Even though the knight's move is rather short, its unique forking power means that its influence can spread much wider than is apparent. In some cases, the knight can set up a kind of barrier; for example, suppose that White has a pawn on a7 and a king on e4, with Black's knight on c7. Then the king

cannot move to d4 or d6 due to the fork ...♘b5+, while d5 and e6 lie directly under the knight's control. Together these squares form a kind of wall, so that to approach the pawn the king must move either via e5, f6, e7 and d7 or via d3, c4, c5 and c6.

W



Kapengut – Begun
USSR 1976

The exposed a5-pawn is doomed. Can White save the game despite the loss of this pawn?

1 ♔d1!

1 ♔d2? ♘c6 costs White the pawn while allowing Black to keep his king in an active position.

1...♘c6 2 ♗d2 ♔b5

Black has to withdraw his king to pick up the a-pawn, which gives White a chance to exchange a pair of pawns.

3 ♔e2 ♘xa5 4 ♔d3

4 c3? ♘b3 5 ♗e1 ♔c4 6 cxd4 ♔xd4 wins for Black as his pieces are well placed to support the advance of the a-pawn.

4...♘c6 5 ♗f4

After 5 c3? ♘e5+ 6 ♔xd4 ♘f3+ 7 ♔e3 ♘xd2 8 ♔xd2 ♔c4 the outside passed pawn is decisive.

5...♔c5

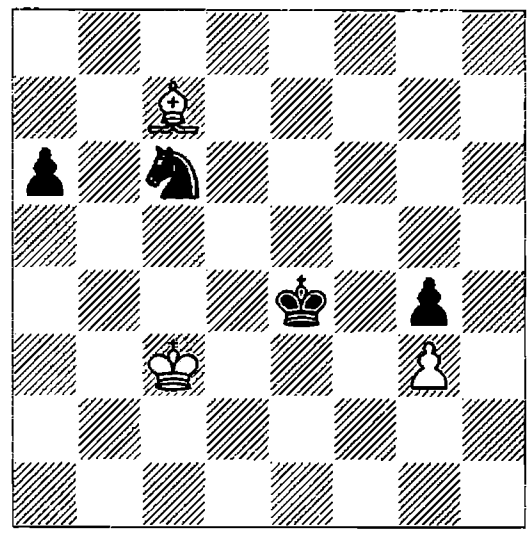
Otherwise White plays ♗d6, after which Black's king can no longer support the d-pawn, nor can he advance the a-pawn further than a4.

6 c3 dxc3 7 ♔xc3 ♔d5 8 ♗c7!

8 ♔b3 ♔e4 9 ♔a4 ♔f3 10 ♗c7 is also good and transposes into the note to White's 9th move.

8...♔e4 *(D)*

W



9 ♔c4?

Kapengut's notes in *Informator 21* make no mention of this mistake, which could have cost White the game. Against the correct reply, this route for the white king takes one move longer to reach a6 than the more direct path via b3 and a4. Had White continued 9 ♔b3!, then he would have drawn; for example, 9...♔f3 10 ♔a4 ♘d4 11 ♔a5 ♘f5 12 ♔xa6 ♘xg3 13 ♔b5 transposes into the game at move 13.

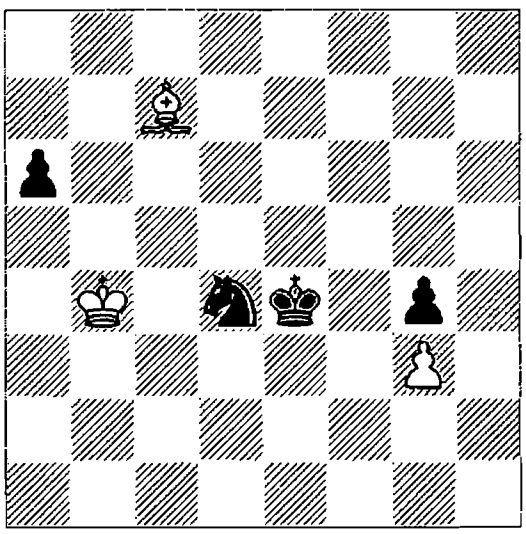
9...♘d4?

Failing to exploit White's error. 9...♔f3? also leads to a draw after 10 ♗d6!, which cuts the knight off from any convenient route to reach the g3-pawn.

9...♘e7! is the winning move because the knight heads towards g3 while at the same time cutting White's king off from reaching a6 directly, since when the king is on b4 or b6 Black has ...♘d5+. This is the 'barrier' concept mentioned above. Therefore, White has to lose a tempo moving his bishop, and the loss of time proves fatal: 10 ♔c5 ♔f3 11 ♗b8 (11 ♔b6? ♘d5+) 11...♘f5 12 ♔b6 ♘xg3 13 ♔xa6 ♘e2 14 ♗h2 ♘g3 15 ♗g1 ♘f1 16 ♔b5 (compared to the note to White's 9th move, here the white king is one square further away) 16...g3 17 ♔c4 ♘e3+! 18 ♔d3 (18 ♔b3 ♘g4 19 ♗a7 ♘e3 20 ♗b8 g2 21 ♗h2 ♔f2 followed by ...♘g4, winning, while 18 ♔d4 ♘g4 19 ♔d3 ♘f2+ 20 ♔d2 ♔g2 traps the bishop) 18...♘g4 19 ♔d4 (19 ♗b6 ♘f2+) 19...♔g2 and Black wins.

10 ♔b4 *(D)*

B



Now the king can again take the direct route and the position is a draw.

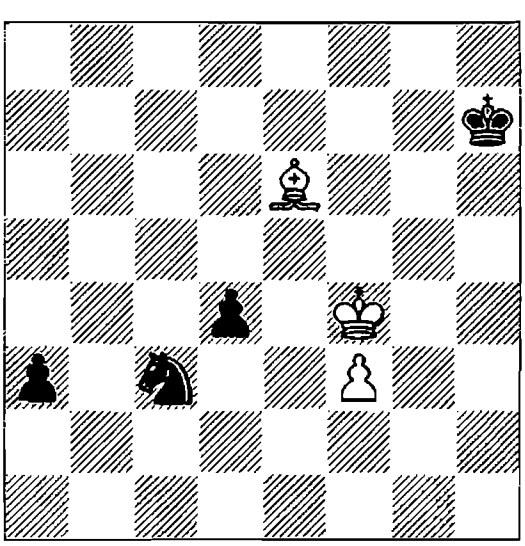
10...♔f3 11 ♔a5 ♘f5 12 ♔xa6 ♘xg3 13 ♔b5 ♘e2 14 ♗h2 ♘g3 15 ♗g1 ♘f1 16 ♔c4 g3

16...♔e2 17 ♔d4 ♘d2 18 ♔e5 ♔f3 19 ♗h2! ♘f1 20 ♗f4 also draws.

17 ♔d3 ♘h2 18 ♗a7 ♘g4 19 ♔d2! ♘e5 20 ♔e1 g2 21 ♔d2 ♘g4 22 ♗g1 ♘f2 23 ♔e1 ♘d3+ 24 ♔d2 ♘f4 25 ♗a7 ½-½

In the next example, Black also missed a win based on a kind of barrier.

W



Kaldor – S. Kagan
Israeli Ch, Tel-Aviv 1974

According to the analysis by Minev and Marić in *Informator 18*, this ending is a draw. Indeed, despite Black's two passed pawns, the proximity of the white king does make it appear that a draw is likely. However, Black could have won using a neat tactical trick.

1 ♗b3

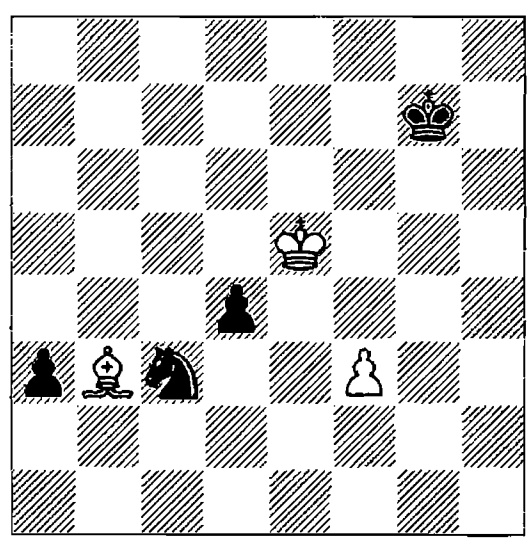
White's problem is the position of his king; if he is unable to improve this, Black will gradually advance his king and win. The only way White can undertake any active play is by ♔e5, meeting ...d3 with ♔d4, forking the knight and d-pawn. In the diagram position this is impossible as Black just promotes the d-pawn, but after the text-move White controls d1 with his bishop, and now ♔e5 becomes a threat. If White plays anything else, Black continues ...♔g7-f6 with a comfortable win.

1...♔g7?

Black simply ignores White's threat, and so gives away half a point. He could have won by 1...♘a4! (White cannot reply ♔e4, so Black transfers his knight to c5) 2 ♗c4 ♘c5 (the perfect square for the knight, since ♔e4 is prevented and ♔e5 loses to ...d3, so White can only wait) 3 ♗d5 (3 ♔g3 ♔h6 4 ♔f2 loses after 4...♘d3+ 5 ♔e2 ♘b4 6 ♔d2 ♔g5 followed by ...♔f4 and then ...a2) 3...♔g6 4 ♗a2 ♔f6 5 ♗c4 ♔e7 6 ♗a2 ♔d6 7 ♗c4 ♘a4 (now that Black's king is close to the d-pawn, he can win by transferring his knight back to c3 and then playing ...a2) 8 ♔g5 (8 ♔e4 ♔c5 9 ♗b3 a2 is also a win for Black) 8...♘c3 followed by ...a2, winning.

2 ♔e5! *(D)*

B



White seizes his chance.

2...♘b5

2...♘e2 3 ♔e4 and 2...d3 3 ♔d4 are likewise safe for White.

3 ♔e4!

Not 3 ♔d5? d3 and Black wins.
3...♔f6 4 f4 ♔g6 5 ♔d3 ♔f5 6 ♔c4 ½-½
6...♔xf4 7 ♔xb5 d3 8 ♔b4 is a draw.

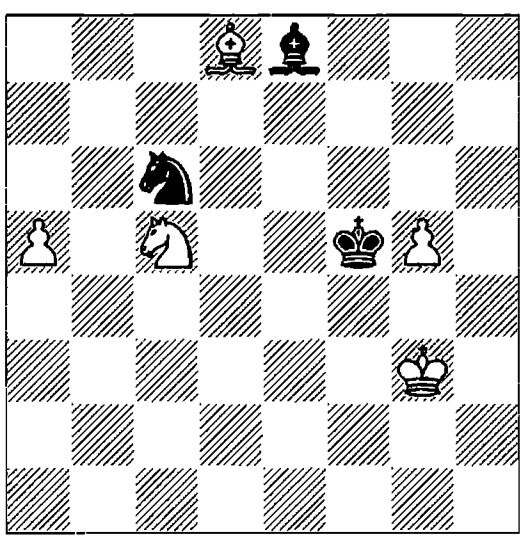
Summary:

- Knight manoeuvres can be tricky, even for grandmasters.
- If a knight needs to head to a particular square (for example, to take a pawn) there may be a number of ways to reach its destination. Look to see if one route enables the knight to perform a second function.
- By using forking possibilities, a knight can sometimes set up a barrier for the enemy king.

6.3.3 Passed Pawn

Passed pawns are an advantage in almost any ending, but if you have a knight against a bishop they confer less of an advantage than in many other cases, since the enemy bishop can restrain them from afar. However, in a few cases the knight can employ its forking or blockading powers to cut the bishop off and allow the passed pawn to advance.

W

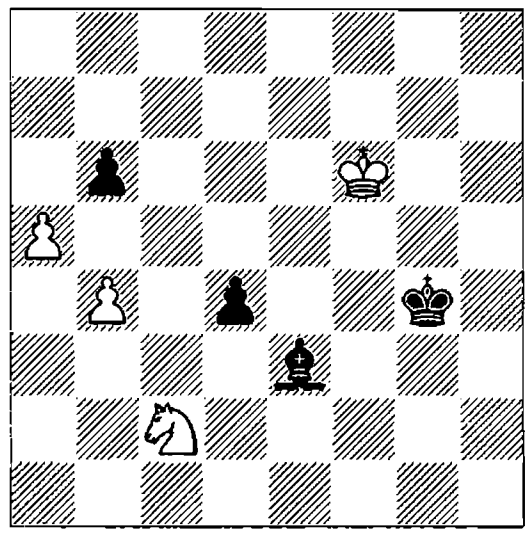


Ivanchuk – Grishchuk
Amber Blindfold, Monte Carlo 2006

Here White's bishop is under attack, but at the moment it is the only piece defending the a5- and g5-pawns. The game concluded **1 a6? ♘xd8 2 ♘b7 ♘c6 3 ♘d6+ ♔xg5 4 ♘xe8 ♔f5 ½-½**. However, White could have won by 1 ♘b7!. After 1...♘xd8 2 ♘xd8 ♔xg5 (2...♗b5 3 ♔h4 leads to a slow but sure win for White with the two extra pawns) 3 a6 ♗g6 4 ♔f3! White's pieces combine perfectly to keep Black's bishop off the long diagonal.

The next example is more complex.

W



Pascual Perez – G. Camacho
Pinar del Rio 1996

White's passed a-pawn is more dangerous than the d-pawn, since the latter cannot advance for the moment due to the attack on the bishop. However, there are very few pawns left, so one cannot say on general principles whether White's advantage is sufficient to win, and concrete analysis is necessary. In fact, White has two ways to win; the first involves reducing the position to a winning ending of ♘+♙ vs ♗, while the second, chosen by White in the game, depends on a remarkable study-like tactical resource.

1 a6!

The technical win runs 1 ♘e1! bxa5 (1...♗f4 2 a6 ♗b8 3 ♔e6 also wins for White) 2 bxa5 ♗f4 (2...d3 3 ♘xd3 ♗a7 4 a6 ♔f3 5 ♔e5! ♔e3 6 ♘b4 ♔d2 7 ♔d6 ♔c3 8 ♘d5+! ♔b3 9 ♔c6 ♔a4 10 ♔b7 is a typical winning line; the bishop must move from a7 and then ♘b6 shuts it off and promotes the pawn) 3 ♔e6! (the priority is to cut off Black's king; 3 a6? ♗b8 4 ♔e6 ♔f4 5 ♔d5 ♔e3 6 ♘c2+ ♔d3 7 ♘xd4 ♗a7 8 ♘b5 ♗g1! 9 ♘d6 ♔c3 is only a draw) 3...♗b8 4 ♔d5! (threatening to take on d4) 4...♗a7 (4...♔f4 5 ♔xd4 and White wins after 5...♗a7+ 6 ♔d5! ♔e3 7 ♔c4! ♔d2 8 ♘d3 ♗b8 9 a6 ♗a7

10 ♘e5 ♔c2 11 ♘c6 ♗b6 12 ♔b5 ♗f2 13 ♘e7! ♗a7 14 ♘c8 ♗b8 15 ♔c6 followed by ♔b7) 5 ♔e4! (the threat is just ♘f3 and ♘xd4) 5...♔g5 (5...♔g3 6 ♘d3 keeps the king out and White wins after 6...♔g4 7 ♘b4 ♔g3 8 ♘c6 ♗c5 9 ♘xd4) 6 ♘f3+ ♔f6 7 ♘xd4 ♗b8 (7...♔f7 8 ♘c6 ♗c5 9 ♔d5 followed by ♘d4, winning; in this line White benefits from having b6 covered by the pawn and demonstrates that it is sometimes a good idea to hold the pawn back if it denies the bishop an important square) 8 ♔d5 ♗c7 9 a6 ♗b6 10 ♘b5 ♔e7 11 ♔c6 ♗f2 12 ♔b7 ♔d7 13 ♘c3 followed by playing the knight to b6.

1...♗g5+

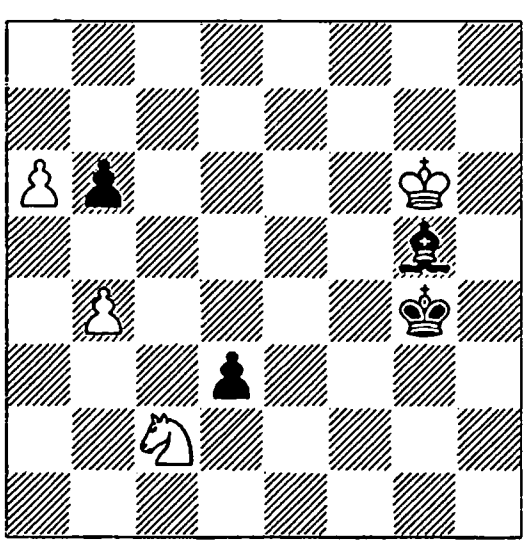
Removing the bishop from the knight's attack with gain of tempo so as to be able to advance the d-pawn.

2 ♔g6!

White's king will play a vital role in restricting the enemy king after both sides promote. 2 ♔e5? only leads to a draw after 2...d3 3 ♘e1 d2 4 ♘d3 ♔f3 5 ♘b2 ♗f4+ 6 ♔d4 ♗b8 7 ♔d3 b5 8 ♔xd2 ♔e4 9 ♔c3 ♔d5 and Black heads back to remove the a-pawn.

2...d3 *(D)*

W

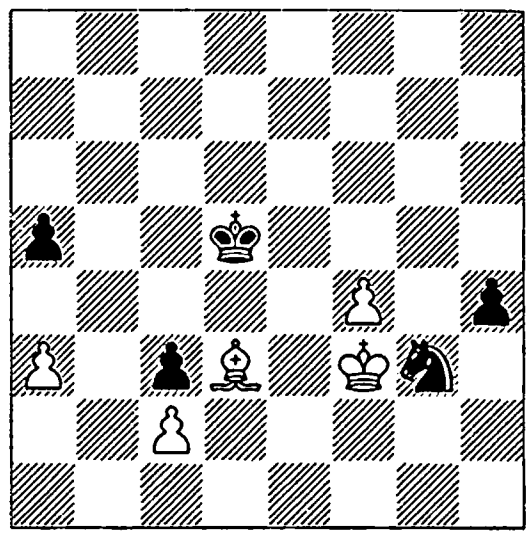


3 ♘e3+!! ♗xe3 4 a7 d2 5 a8♕ d1♕ 6 ♕g2+! 1-0

The remarkable point of White's play. Thanks to the well-placed white king and the self-blocking effect of the bishop on e3, Black cannot avoid losing his queen after 6...♔h4 7 ♕h2+ ♔g4 8 ♕h5+ or 6...♔f4 7 ♕g5+ ♔e4 8 ♕f5+ ♔d4 9 ♕d7+.

In the next position, Black's knight manoeuvres finally managed to confuse White into losing a drawn position, although you wouldn't think that was what happened from reading Black's notes in *Informator.*

B



Zigo – Bereziuk
Litomysl 1995

This is another good example of annotation by result. Bereziuk, playing Black, won the game and later annotated it himself. In his opinion Black is clearly better in the diagram position and it only took one inaccuracy by White at move three to turn it into a loss. In my view Black has no real advantage in the diagram position and it was only several moves after Bereziuk considered the position lost that White actually committed the fatal error.

In general, a bishop is better than a knight in an open position, but here there are several factors operating in Black's favour. First of all, his passed pawn is both more advanced and further 'outside' than White's. Secondly, the c2-pawn is locked on the same coloured square as White's bishop and if by any chance this pawn should fall, the c3-pawn will be perilously near the queening square. However, these factors are only sufficient to balance the bishop vs knight advantage, and while it may be slightly easier to play with Black, he cannot count on any tangible advantage.

1...♘h5

The best move, which at least ensures that Black cannot be worse.

2 ♔g4

Forcing the issue is the clearest way to steer the game towards a draw, even though a more passive plan such as 2 ♗g6 ♘f6 3 ♗f7+ ♔d4 4 ♗e6 should also suffice to hold the game.

2...h3

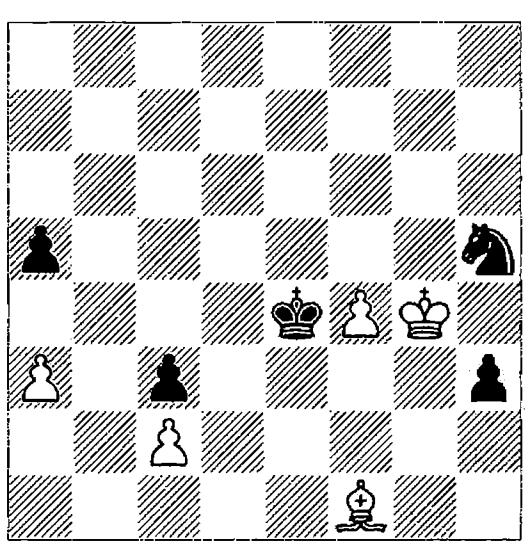
The point of Black's last move, since White can take neither the knight nor the pawn.

3 ♗f1

Dubious according to Bereziuk, but in my view this is a perfectly good move and amply sufficient to reach a draw. 3 ♗a6, aiming for a possible check on b7, is also safe; for example, 3...♘f6+ (3...♔c6 4 ♗f1 ♘xf4 5 ♔xf4 h2 6 ♗g2+ ♔b5 7 ♔e3 ♔a4 8 ♔d3 ♔xa3 9 ♔xc3 ♔a2! also leads to a draw) 4 ♔xh3 ♔e4 5 ♔g3 ♘h5+ 6 ♔f2 ♘xf4 was given as 'clearly better for Black' by Bereziuk. However, I don't see any winning chances; for example, 7 ♗f1 ♔d4 8 ♗b5 ♘e6 9 ♔e2 ♘c7 10 ♗c6 and White defends comfortably.

3...♔e4 *(D)*

3...♘xf4 4 ♔xf4 h2 5 ♗g2+ ♔c5 6 a4 ♔b4 7 ♗c6 is winning for White according to Bereziuk, but this is also wrong as 7...♔c5 (7...h1♕? 8 ♗xh1 ♔xa4 9 ♔e3 ♔a3 10 ♔d3 ♔b2 11 ♗c6 really is winning) 8 ♗g2 ♔b4 forces a draw.



4 f5!

Not 4 ♗xh3? ♘xf4 5 ♗f1 ♔e3, winning for Black, but White had a second safe line in 4 ♔xh5! h2 5 ♗g2+ ♔xf4 and now 6 ♔h4?, the only move considered by Bereziuk, does lose after 6...♔e3 7 ♔g3 ♔d2 8 ♗e4 h1♕! 9 ♗xh1 ♔xc2. However, there are two drawing lines: 6 ♔g6! ♔e3 7 ♔f5 ♔d2 8 ♗e4 h1♕ 9 ♗xh1 ♔xc2 10 ♗f3 ♔b3 11 ♗d1+ ♔xa3 12 ♔e4 ♔b2 13 ♔d3 and 6 a4! ♔e3 7 ♔g4 ♔d2 8 ♗e4 h1♕ 9 ♗xh1 ♔xc2 10 ♗e4+ ♔b3 11 ♔f3 ♔xa4 12 ♔e2 with a simple draw in both cases.

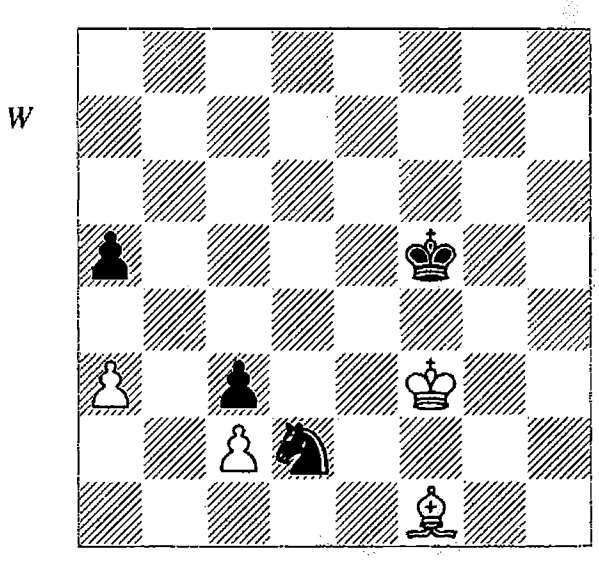
4...♘f6+ 5 ♔xh3

5 ♔g5? ♘h7+? 6 ♔g6 ♘f8+ 7 ♔f7 h2 8 ♗g2+ ♔xf5 9 ♔xf8 ♔f4 was given as winning for Black by Bereziuk, but it is also a draw after 10 ♔e7 ♔e3 11 ♔d6 ♔d2 12 ♗e4 h1♕ 13 ♗xh1 ♔xc2 14 ♔c5 ♔b3 15 ♗e4 ♔xa3 16 ♔b5 a4 17 ♗c2 and the a-pawn falls. However, Black does actually have a win in this line, by 5...h2! 6 ♗g2+ ♔e5 7 ♗h1 ♘d5 8 ♗f3 ♘e3 9 f6 ♘xc2 10 f7 ♘d4 and the knight arrives back on e6 in time to win.

5...♔xf5

Black is now threatening to win by ...♔e4-e3, but White's king is in time to prevent this.

6 ♔g3 ♘e4+ 7 ♔f3 ♘d2+ *(D)*



8 ♔e2?!

While this is perhaps not losing, it is a mistake to put the king on a square where it seriously obstructs the bishop, and the consequence of this is that White loses his a-pawn. 8 ♔e3? loses after 8...♘xf1+ 9 ♔d3 ♔e5 10 ♔xc3 ♔d5 11 ♔b3 ♔c5 12 ♔a4 ♔b6 13 c4 ♘e3 14 c5+ ♔a6 15 c6 ♘d5 16 ♔b3 ♔b5 and the c-pawn falls, but after 8 ♔f2! White is in no danger: 8...♔e4 9 ♗d3+ ♔d4 10 a4 ♘b3 11 ♔f3 (but not 11 ♔e2?? ♘c1+) 11...♘c5 12 ♗b5 ♘e4 13 ♔e2 ♘d6 14 ♗d3 and Black has no winning chances.

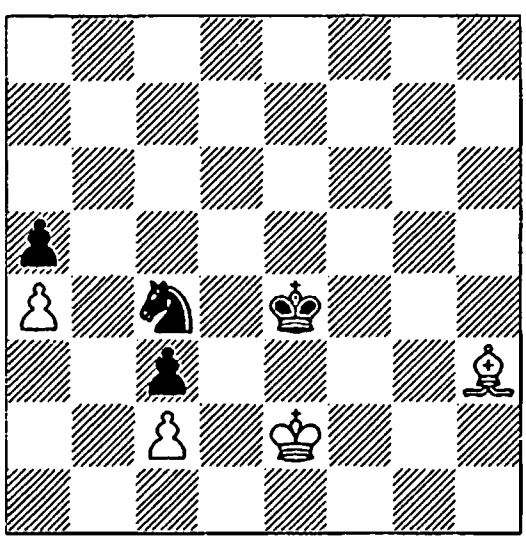
8...♔e4

Now Black threatens to exchange on f1, so the bishop must move.

9 ♗h3 ♘c4 10 a4? *(D)*

Now White is doomed because he loses the c-pawn rather than the a-pawn, which is a far more serious matter. 10 ♔d1! ♘xa3 11 ♗d7 would still have offered good drawing chances. Black's only real plan is to push the a-pawn, but then White's king moves to b1 and the a-pawn itself can become subject to attack. I don't see how Black wins; for example, 11...♔e3 12 ♗e8 ♘c4 13 ♗b5 ♘b6 14 ♗e8 a4 15 ♔c1 (it's time to cross to b1) 15...♔d4 16 ♔b1 ♔c5 17 ♔a2 ♔b4 18 ♗f7 ♘d7 19 ♗g6 ♘e5 20 ♗h7 and Black is not making progress.

B



10...♘e3!

As was mentioned at the start, winning the c2-pawn gives Black an advanced passed pawn, and this proves too much for White.

11 ♗e6 ♘xc2 12 ♗f5+

Passive defence is no better: 12 ♔d1 ♘d4 13 ♗c4 ♔e5 14 ♔c1 ♔d6 (heading for b4) 15 ♔b1 ♔c5 16 ♗f7 ♔b4 17 ♗e8 ♔b3 and now White must surrender the a4-pawn.

12...♔xf5 13 ♔d3 ♘d4 14 ♔xc3 ♔e5 15 ♔c4 ♔e4 0-1

16 ♔c5 ♔d3 17 ♔b6 ♘b3 is an easy win.

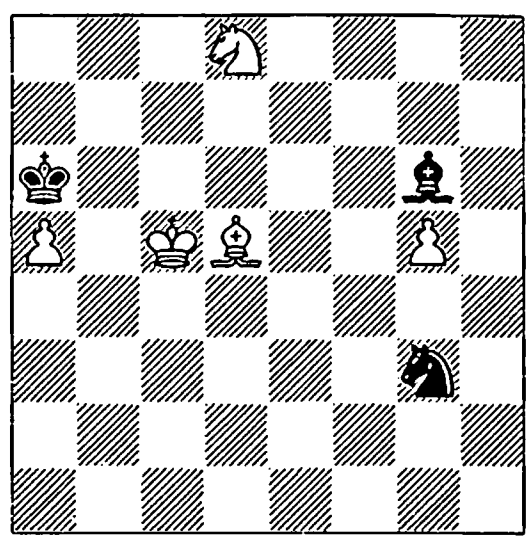
Summary:

- In knight vs bishop endings, passed pawns are less of an advantage for the knight side since the knight has to be close by to support the pawn, while the bishop can hold the pawn up from long range.
- It's sometimes possible to manoeuvre with the knight to cut off the enemy bishop's control of a square in front of the pawn and thus enable the pawn to advance or even promote.

6.3.4 Knight + Two Pawns vs Bishop

We saw earlier how ♗+2♙ vs ♘ may not be a win if the pawns are blockaded. When the side with the knight has the two pawns, the ending is again a general win but awkward situations can also arise. The main problem is usually that the knight is tied down to the defence of one pawn, severely limiting its mobility.

W



Predojević – Romanov
World Junior Ch, Istanbul 2005

This is an example of how unusual defensive resources can trip up even very strong players (White was rated 2558 at the time of this game). White is of course completely winning since he is two pawns up and all his pieces occupy active positions. The simplest win was to play 1 ♔b4, followed by ♗c4+, forcing the enemy king back. However, White chose a different method of defending the a-pawn.

1 ♘c6??

Throwing away the win. Black is now able to exchange his knight for White's bishop, leading to a ♘+2♙ vs ♗ position which White is unable to win against correct defence.

1...♘e4+!

Now White must exchange, or he loses the g-pawn.

2 ♗xe4 ♗xe4

It's easy to assume that two extra pawns guarantee victory, but that isn't always the case and the current position is an exception. Unexpectedly, it is a position of reciprocal zugzwang since any move by pawn or knight costs White a pawn immediately, while as we shall see ♔d6 also should not win. Were Black to play, he couldn't maintain the position as ...♔b7 allows ♘b4, while moving the bishop along the b1-h7 diagonal allows White to free himself with ♔b4.

3 ♔d6 ♔b5

Black isn't threatening to take the knight, since 4...♗xc6? would lose to 5 a6 ♗e4 6 a7 ♔b6 7 ♔e5! and Black cannot stop both pawns. However, even though Black doesn't have a major threat, White cannot achieve much while he is so tied down.

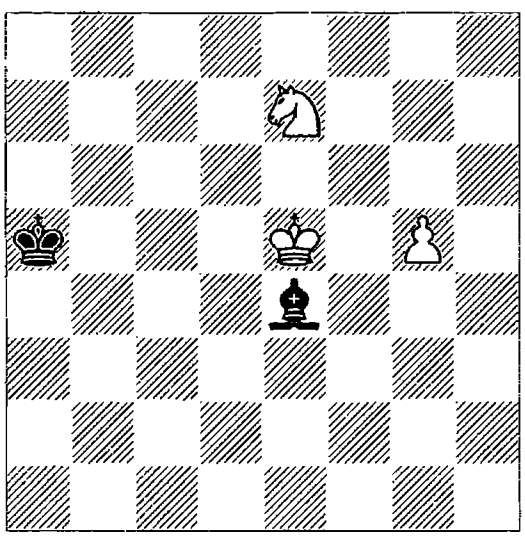
4 ♔c7 ♔a6

This is the only move to maintain the draw. 4...♗xc6? would lose, this time to 5 a6 ♗e4 6 a7 ♔a6 7 ♔b8.

5 ♔d6 ♔b5 6 ♘e7

The only way to play for a win is to abandon the a-pawn and hope to achieve something with the g-pawn, but this should not be sufficient for a win.

6...♔xa5 7 ♔e5 *(D)*



7...♗h7

Black could also have drawn by 7...♗b1 8 ♘f5 ♔b6 9 g6 ♔c7 10 g7 ♗a2 11 ♔f6 ♔d7 12 ♘h6 ♔e8 and the king arrives just in time to prevent ♘f7. It is worth noting that the draw often becomes easier if White has to advance the pawn to g7 (as in this line), since White's best winning chances are usually when the pawn is on g6, taking away squares from the bishop. The move played is more complicated, since playing the bishop to h7 only holds up the g-pawn temporarily.

8 ♔f6 ♔b6 9 ♘g6

Threatening ♔g7, so the bishop must move.

9...♗g8 10 ♘f8 ♔c7?

The losing move, allowing White to keep the black king at bay while he advances the pawn to g7. Black should have continued 10...♔c6!, and now:

1) 11 ♔e5 ♗f7 is an easy draw.

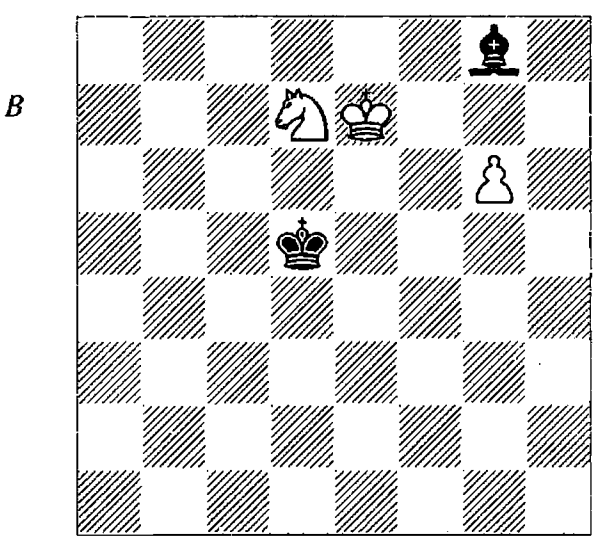
2) 11 ♔e7 ♔d5 12 ♘d7 (or 12 g6 ♔e5) 12...♔e4! 13 ♔f6 (threatening to win by g6) 13...♗h7! 14 ♘f8 ♗f5 15 ♘g6 ♗g4 16 ♘e7 ♗h5 and Black saves the game.

3) 11 g6 ♔d6! 12 g7 ♗a2! (not 12...♗c4? 13 ♘g6, when 13...♔d7 is impossible due to the fork on e5) 13 ♘g6 (threatening ♘e5, forcing ...♗g8, and then ♘f7+ followed by ♘h6) 13...♔d7! 14 ♘e5+ ♔e8 and Black defends.

11 ♔e7!

The key move and the only one to win. Black cannot prevent the advance of the pawn and it now takes too long to play his king round via c6 and d5.

11...♔c6 12 g6 ♔d5 13 ♘d7! *(D)*



Preventing ...♔e5 and threatening a deadly fork on f6.

13...♔d4

Or 13...♔e4 14 ♔f6! (14 ♘f6+? ♔f5 is a draw) 14...♔f4 15 ♘e5 (threatening ♘f7-h6

followed by g7) 15...♗a2 16 ♘f7 ♗b1 17 g7 ♗h7 18 ♘g5 ♗g8 19 ♔g6 followed by ♘f7 and ♘h6. Note how in these lines White leaves the pawn on g6 in order to take away the h7-square from the bishop, and only advances it to g7 when the win is assured.

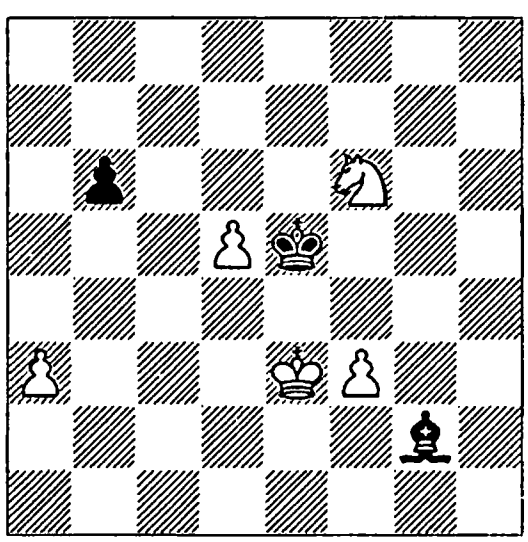
14 ♔f6

White can also win by 14 ♘f6 ♗a2 15 ♘g4 ♗b3 16 g7 ♗g8 17 ♔f8 ♗b3 18 ♘h6 followed by ♘f7.

14...♗b3 15 ♘e5 ♗c2 16 g7 ♗h7 17 ♘f3+ 1-0

17...♔e3 18 ♘g5 ♗g8 19 ♔e7 ♔f4 20 ♔f8 followed by ♘f7 promotes the pawn.

The error of making the automatic assumption that ♘+2♙ vs ♗ will be a win is relatively common. Here's another example.



Gaprindashvili – Sternina
USSR 1974

Marić's notes in *Informator 17* consisted of no more than a couple of exclamation marks appended to White's moves, implying that the play was accurate. As we shall see, this is not the case and both sides made errors in this instructive example. At the moment, White is two pawns up but her knight and d-pawn are under fire, so she has to take some positive action.

1 ♘d7+?

Throwing the win away. 1 ♔f2! was the decisive move, exploiting the limited mobility of Black's bishop. After 1...♗h3 (1...♗xf3 2 ♔xf3 ♔xf6 3 ♔e4 is a simple win, while 1...♗h1 2 ♘d7+ ♔xd5 3 ♘xb6+ ♔c5 4 ♘a4+ ♔c4 5 ♘b2+ ♔b3 6 a4 ♔b4 7 ♔g3 followed by ♔g4 and f4 is also straightforward) 2 ♘g4+ ♔d6 (after 2...♔xd5 3 ♔g3 White forces the exchange of minor pieces, again with an easy win) 3 ♔g3 ♗f1 4 ♘e3 ♗e2 5 ♔f4 White has secured her two extra pawns and now wins without any problems.

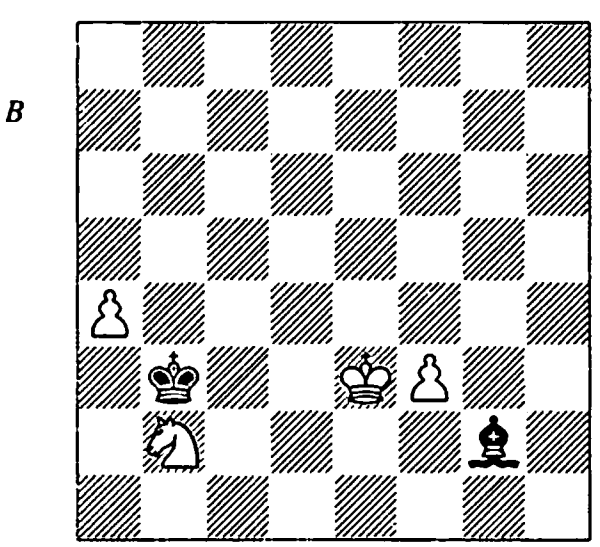
1...♔xd5 2 ♘xb6+ ♔c5

White is still two pawns up, but the reduction in material has operated in Black's favour. If Black's king can round up the a-pawn, then it will be possible to sacrifice her bishop for the f-pawn.

3 ♘a4+

White finds a way to maintain her a-pawn, but only by retreating the knight to an inactive square.

3...♔c4 4 ♘b2+ ♔b3 5 a4!? *(D)*



This is White's idea, which at first sight appears decisive. If the knight is taken, Black's bishop will be unable to stop the two passed pawns.

5...♔xb2?

Black gives up hope just when the draw was within reach. Perhaps surprisingly, 5...♗h3! would have held the game. Now that Black's bishop is on a better square, she is genuinely threatening to take the knight, which limits White's options:

1) 6 ♔d4 ♔xb2 7 a5 ♗c8! draws.

2) 6 a5 ♗c8! (renewing the threat to take the knight) 7 f4 (7 ♘d3 ♔c4 followed by ...♔b5) 7...♔b4! and the a-pawn falls.

3) 6 f4 ♔xb2 7 a5 ♔c3 8 a6 ♔c4 9 a7 ♗g2 10 f5 ♔c5! and the king is within the square of the f-pawn.

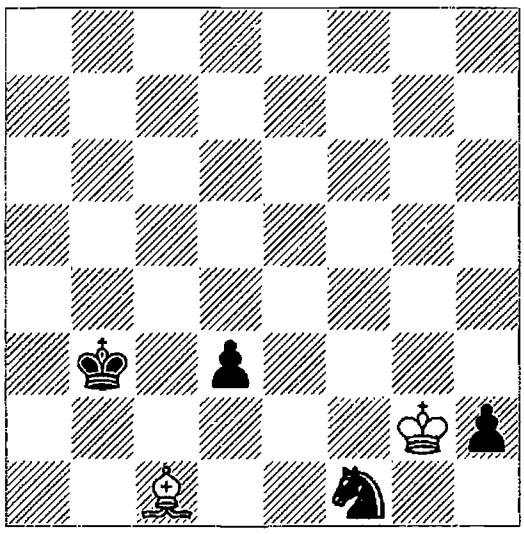
The important points here are that one should not give up when the obvious move doesn't work, and that in an endgame it is sometimes more important to take a pawn (which can become a queen) than to take a piece.

6 a5 ♗f1 7 f4 ♔c3 8 f5 ♔b4 9 f6 1-0

After 9...♗c4 10 a6 the pawns cannot be stopped.

Several elements are combined in the following position, which features logical thinking, zugzwang and triangulation.

B



J. Jagodzinska – G. Olarasu
Baile Herculane 1984

White is two pawns down in this unusual position, but there is no obvious win for Black. If she plays ...♔c2 and then ...d2, White gives up her bishop for the d-pawn with a sure draw, as any attempt to approach the h-pawn with her king gives stalemate, so Black cannot free her knight from f1. Indeed, according to Stoica's notes in *Informator 38*, the position is a draw. However, Black actually has a win, which is hard to spot but quite logical once you have seen it.

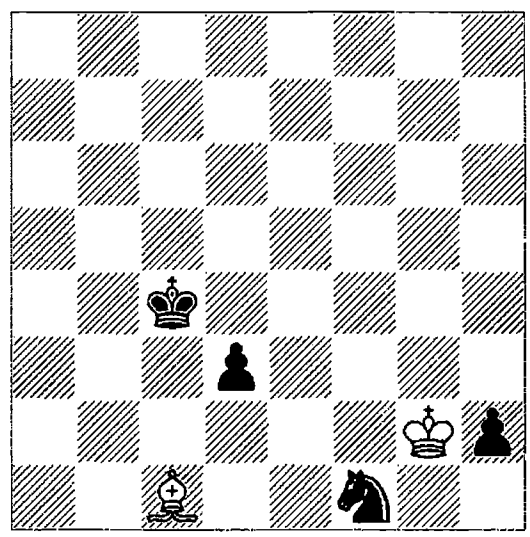
1...♔c2?!

Heading in the wrong direction. The first point to note is that the position with Black's king on e4, White's bishop on c1 and White's king on g2 is zugzwang with White to play. If the bishop moves to g5 or h6, Black plays ...♘e3+ and ...d2, so White must play ♔h1. Black replies ...♔f3 and now White has no choice but to play the bishop across the e3-square, when once again ...♘e3 wins. How does Black force White to play her bishop to c1? The answer is to arrive at the position with the white bishop on h6 and Black's king on f5, with White to play. The king covers g5 and f4, so White has the choice between ♗c1, when ...♔e4 is the aforementioned zugzwang, or ♔h1, which is also met by ...♔e4; this threatens ...♘e3 and so forces ♗c1, but then ...♔f3 repeats an earlier zugzwang.

To arrive at the ♔f5 vs ♗h6 position with White to play requires a little subtlety on Black's part. One final point is worth mentioning before we look at the concrete analysis: Black must not allow White to transfer her bishop to the a5-e1 diagonal, because then the position is truly a draw.

The simplest winning line runs 1...♔c4! *(D)*, and now:

W



1) 2 ♔h1 ♔d5 3 ♔g2 (3 ♗h6 ♔e4 4 ♗c1 ♔f3 is the same) 3...♔e4 4 ♔h1 ♔f3 is one of the zugzwangs mentioned above. White must move her bishop to g5 or h6, but then Black plays ...♘e3 followed by ...d2.

2) 2 ♗h6 ♔d5 transposes to line 3.

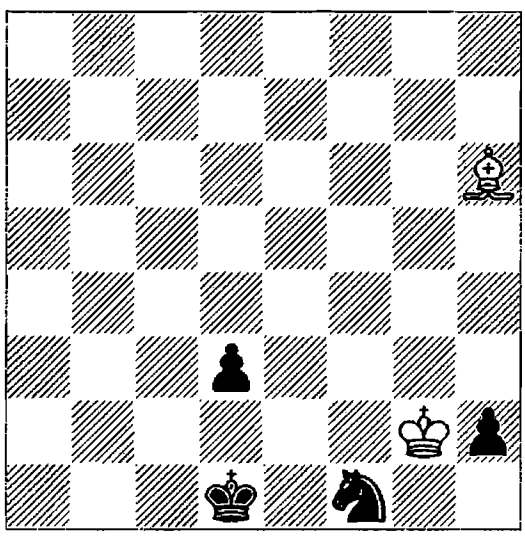
3) 2 ♗g5 ♔d5! (2...♔d4?! loses time because after 3 ♗f6+ Black must return to c4 to prevent ♗c3) 3 ♗h6 (the only move, as 3 ♗f4 ♔d4 threatens ...♘e3 and so forces 4 ♗c1 ♔e4 with zugzwang) 3...♔d4! (the start of a triangulation which transfers the move to White

and forces the bishop away from the optimum square h6) 4 ♗g7+ (the only move, as ...♘e3+ was a threat) 4...♔c4 5 ♗h6 ♔d5 (now White must move to an inferior square) 6 ♗g5 (after 6 ♗f4 ♔d4! Black wins as before) 6...♔e5! (not 6...♔e4? 7 ♗c1 and Black must start the winning procedure again) 7 ♗h6 (had the bishop already been on h6, then ...♔e5 would have allowed a draw by ♗g7+ and ♗c3, but as it is White has nothing better than to return to h6; for example, 7 ♔h1 ♔e4 8 ♗c1 ♔f3 or 7 ♗c1 ♔e4) 7...♔f5! (now Black has reached the key zugzwang position) 8 ♗c1 (or 8 ♔h1 ♔e4 9 ♗c1 ♔f3) 8...♔e4 9 ♔h1 ♔f3 and Black wins.

2 ♗h6 ♔d1? *(D)*

Given an exclamation mark in *Informator*, this move actually throws away the win by allowing White to transfer her bishop to the other diagonal. Not, of course, 2...d2? due to 3 ♗xd2, but turning back with 2...♔c3 or 2...♔b3 would still have won.

W



3 ♗g5?

Stoica rightly criticizes this move. The only move to draw is 3 ♗f8!, when there is nothing Black can do, since White threatens ♗b4 and then there is no way to drive the bishop off the a5-e1 diagonal. More drastic methods also fail to win; for example, 3...♘e3+ (3...d2 4 ♗b4 ♔e2 5 ♗xd2 and 3...♔e2 4 ♗b4 ♘e3+ 5 ♔xh2 ♘d5 6 ♗a5 are also drawn) 4 ♔xh2 ♘d5 5 ♗h6 (now that the h2-pawn has gone, this leads to a draw) 5...♔e2 6 ♗c1 and White is safe.

3...♔e2

Black spots a neat win. The threat is ...♘e3+

4 ♗c1 h1♕+!

A surprise. Black draws the king into the corner in order to set up a zugzwang.

5 ♔xh1 ♔f2!

A familiar idea in a slightly different setting. The bishop must cross the e3-square.

6 ♗g5 ♘e3 0-1

Summary:

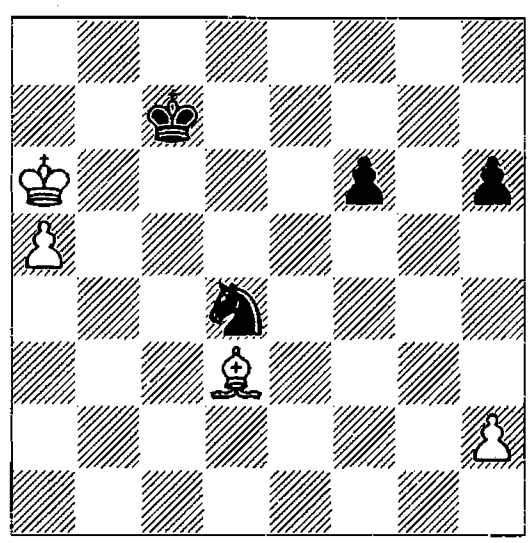
♘+2♙ vs ♗ is generally winning, but there can be awkward situations in the following cases:

- The knight is tied down to the defence of one of the pawns.
- There is the possibility to give up the bishop for one of the pawns because the resulting ♔+♘+♙ vs ♔ position is drawn (as in the final example above).

6.3.5 Bad King Position

No matter what other advantages you may have, it's hard to compensate for a miserable king position.

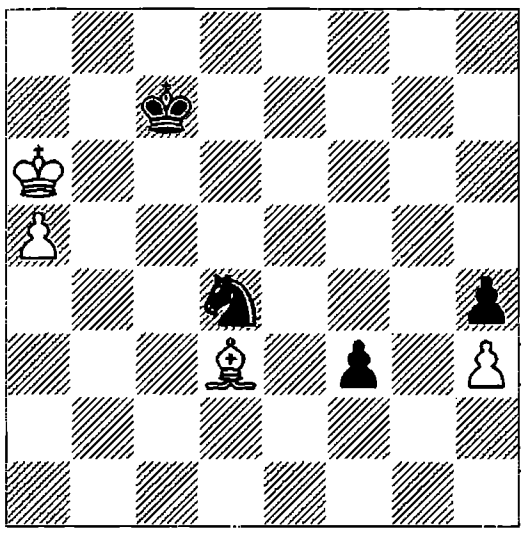
B



Kotsur – Kempinski
Moscow 2005

White clearly faces some problems due to his poor king position. Black's king and knight confine the king to the a-file, while Black has a passed f-pawn, which is able to march up the board. Despite these disadvantages, the position should be a draw provided White defends accurately.

Before looking at what happened in the game, we must first consider a preliminary position.



Kotsur – Kempinski
Analysis diagram

This position is reciprocal zugzwang. Two important points to note are that if White plays ♔a7 and a6, then he loses because his king is too confined, and that the plan of ...♔c6, ...♘b3 and ...♔c5-b4, winning the a5-pawn, is often fatal for White. Let's first suppose that White is to play.

1 ♗e4

Or:

1) 1 ♔a7? loses at once to 1...♘c6+.

2) 1 ♗f1 (1 ♗c4 ♔c6 is the same) 1...♔c6! 2 ♗d3 (after 2 ♔a7 ♘b3 3 a6 ♔c7 4 ♗d3 ♘d4 5 ♔a8 f2 followed by ...♘c6 Black wins as in the main line) 2...f2 (now the threat is ...♘b3 and ...♔c5-b4) 3 ♔a7 ♘b3 4 a6 ♔c7 transposes to the main line.

1...f2 2 ♗d3

After 2 ♗g2 ♘c2 3 ♗f1 ♘e3 4 ♗e2 f1♕ 5 ♗xf1 ♘xf1 6 ♔b5 ♘d2 7 ♔c5 ♘e4+ 8 ♔d4 ♘f2 Black wins by taking the h-pawn.

2...♔c6 3 ♔a7

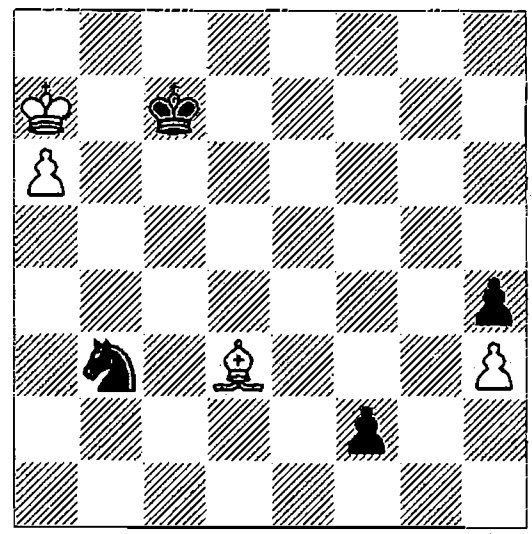
The only move, for otherwise Black plays ...♘b3, preventing the white king from moving, and then ...♔c5-b4.

3...♘b3 4 a6 ♔c7 *(D)*

Now the white king is too confined.

5 ♗e2 ♘d4 6 ♗d3 ♘c6+ 7 ♔a8 ♔b6 8 ♗f1 ♘b4 9 ♔b8 ♘xa6+ 10 ♔c8 ♘c5 11 ♗g2

11 ♔d8 ♔c6 12 ♔e7 ♔d5 13 ♔f6 ♘e4+ 14 ♔g6 ♔e5 also wins for Black.



11...♔b5 12 ♔c7 ♔c4 13 ♔d6 ♔d4 14 ♔e7 ♔e3 15 ♔f6 ♔e2 16 ♔g5 ♘d3 17 ♔xh4 ♘f4

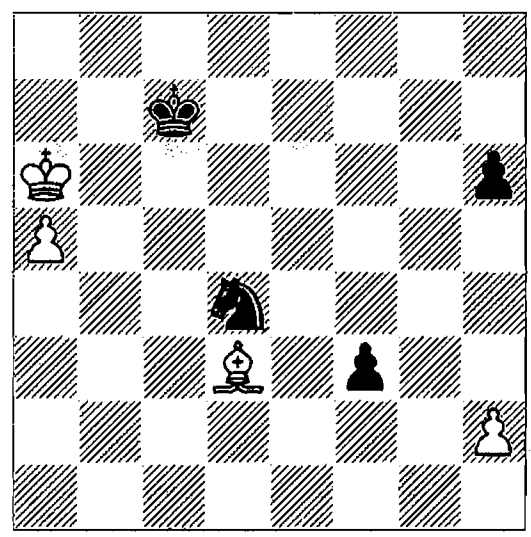
and Black wins.

However, with Black to move things are different because 1...♔c6 (after 1...f2 2 ♗f1! ♔c6 3 ♗g2+! Black must return to c7, since otherwise White plays ♔b7) 2 ♗e4+ ♔c5 3 ♗xf3 ♘xf3 4 ♔b7 is a draw. The important point is that White has to be able to meet ...♔c6 with a check on the long diagonal, which gives Black no time to play both ...♘b3 and ...♔c5.

Now let's return to the game.

1...h5

The alternative is first of all to push the f-pawn, which is instructive as we see some of the dangers facing White: 1...f5 2 ♗f1 f4 3 ♗d3 f3 *(D)* and now:



1) 4 ♗f1? is wrong due to 4...♔c6!, emphasizing the important point that when Black's

pawn is on f3, White must be able to meet ...♔c6 by ♗e4+. Then 5 ♗d3 f2 6 ♗c4 (this only delays ...♘b3 by one move) 6...♔c5 7 ♗f1 ♘b3 is a win for Black, while after 5 ♔a7 ♘b3 6 a6 ♔c7 he wins as in the main line of the analysis diagram.

2) 4 h4? h5 5 ♗f1 ♔c6 and again White lacks the vital check on e4.

3) 4 h3! (this is the only move to draw) 4...h5 5 ♗e4 f2 (after 5...h4 6 ♗d3 it is Black to play in the reciprocal zugzwang of the analysis diagram) 6 ♗g2 ♘f5 (6...♘c2 7 ♗f1 ♘e3 8 ♗d3 f1♕ 9 ♗xf1 ♘xf1 10 ♔b5 is a draw, although it would be a win for Black with the black pawn on h4) 7 ♗f1 ♘e3 (7...♘d6 8 ♗d3 ♔c6 9 ♗f1 ♔c5 10 ♔a7 ♘c4 11 a6 ♘a5 12 ♔b8 ♔b6 13 ♔c8 ♘b3 14 ♔d7 ♘d2 15 ♗e2 is also a draw) 8 ♗e2 ♔c6 9 ♔a7 f1♕ 10 ♗xf1 ♘xf1 11 ♔b8 ♔b5 12 ♔c7 is drawn.

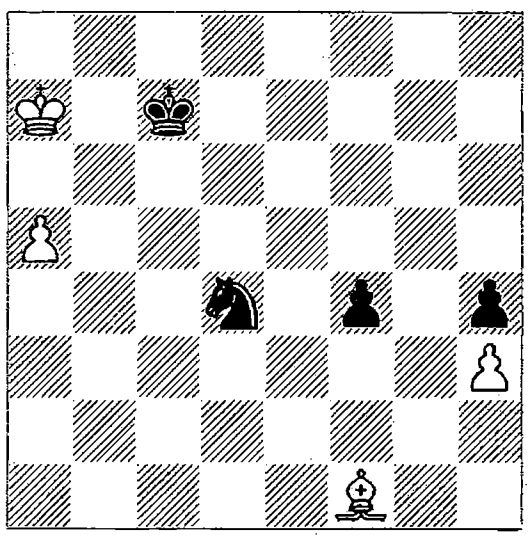
It is understandable that Black decided to push his pawn to h4, because this improves his chances if he wins the white bishop. Unfortunately, in doing so he gave up a possible reserve tempo and this should have enabled White to draw.

2 h3 h4 3 ♗f1

White can only wait.

3...f5 4 ♔a7 f4 *(D)*

W



5 a6?

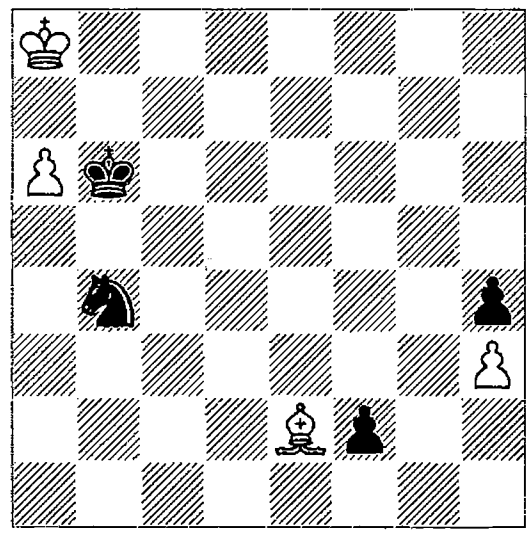
A serious mistake. As we have already seen, White should never allow his king to become blocked in on a7. He could have drawn by 5 ♔a6! ♔c6 (5...f3 6 ♗d3 is the reciprocal zugzwang with Black to move) 6 ♗d3 (6 ♔a7 also draws) 6...♘b3 (6...f3 7 ♗e4+ ♔c5 8 ♗xf3 ♘xf3 9 ♔b7 is a draw) 7 ♗c4 ♘c5+ (7...♘d2 8 ♗b5+ ♔c5 9 ♗e2 ♘b3 10 ♗d1! holds on as 10...♔b4 11 ♗xb3 ♔xb3 12 ♔b6 is a draw) 8 ♔a7 ♔c7 9 ♗e2 ♘b3 10 ♔a6 ♘d4 11 ♗f1 f3 12 ♗d3 and we always return to the same reciprocal zugzwang.

5...f3 6 ♔a8 ♘c6 7 ♗c4 ♔b6

Now White loses his a-pawn, after which he has no chance.

8 ♗f1 f2 9 ♗e2 ♘b4 *(D)*

W



10 ♔b8

10 a7 ♔c7 11 ♗c4 f1♕ 12 ♗xf1 ♘d5 and Black mates next move.

10...♘xa6+ 11 ♔c8 ♘c5 12 ♔d8 ♘e4 13 ♔e7 ♘g3 14 ♗d3 ♔c5 0-1

Avoiding the last trap: 14...f1♕?? 15 ♗xf1 ♘xf1 16 ♔f6 ♘h2 17 ♔g5 ♘f3+ 18 ♔g4 and White draws. After the move played, Black wins with ...♔d4-e3, followed by ...♘e2 promoting the pawn.

Summary:

- A poor king position is bad in any ending. A particular danger with passed rook's pawns is getting your king stuck in front of the pawn; then advancing the pawn only confines the king further.

7 Queen Endings

7.1 Introduction

Queen endings are unlike other endings for several reasons. First of all, in most endings there is little danger of mate because the attacking power of the material on the board is limited, but a queen can deliver mate with just the assistance of the king or a pawn. The power of the queen can also help the defender, since a lone queen can often deliver perpetual check. Thus king-safety is an important consideration for the attacker, since this reduces the chances of a perpetual.

Queen endings are also unusual in that, in the absence of the kings, a queen can escort a passed pawn to the eighth rank all by itself. Thus if, for example, White has a queen on a1 and pawn on a5, and Black's queen is blockading the pawn on a6, White can play ♕a4-b4-b6, dislodging the enemy queen and clearing the way for the advance of the pawn. Thus the main defence against an outside passed pawn is often to expose the enemy king and aim for perpetual check on the other side of the board.

In our first two sections, we look at various tactical ideas that can arise in queen endings. Stalemate is relatively common in queen endings, but it is often overlooked. Section 7.2 (see this page) gives some examples, while mating ideas form the subject of Section 7.3 (page 294).

In the next few sections we look at some basic endgames. Some knowledge of these is important because they can arise by pawn promotion from other types of endings, especially pawn endings. As usual, we shall not give an encyclopaedic coverage but concentrate on the key points of most value to over-the-board players and on those areas that are poorly covered in the standard endgame textbooks. The most basic ending of ♕+♙ vs ♕ may be found in Section 7.4 (page 299), while the construction of endgame tablebases has led to some surprising discoveries in the ending of ♕+2♙ vs ♕, which we look at in Section 7.5 (page 303). ♕+♙ vs ♕+♙ is another important material balance which arises fairly often in practice, and this is covered in Section 7.6 (page 307).

Just as pawn endings can lead to queen endings via pawn promotion, so queen endings can lead to pawn endings as a result of a queen exchange. If the queens disappear, the whole character of the position changes and this requires a mental readjustment. Poorly judged queen exchanges are a common source of mistakes in queen and pawn endings and we take a look at this in Section 7.7 (page 310).

In Section 7.8 (page 313), we briefly examine one of the most common mistakes in queen endings: giving a series of pointless checks which only helps the opponent.

7.2 Stalemate

The power of the queen makes stalemate ideas relatively common in queen endings. Even though the presence of queens should be a warning signal, it's amazing how often players are simply oblivious to the possibility of stalemate until it's too late.

The following diagram features one of the most common stalemate tricks in chess, and players regularly fall into it. The position is an easy win for Black, provided only that he avoids White's last trap.

1...♔c3 2 h4

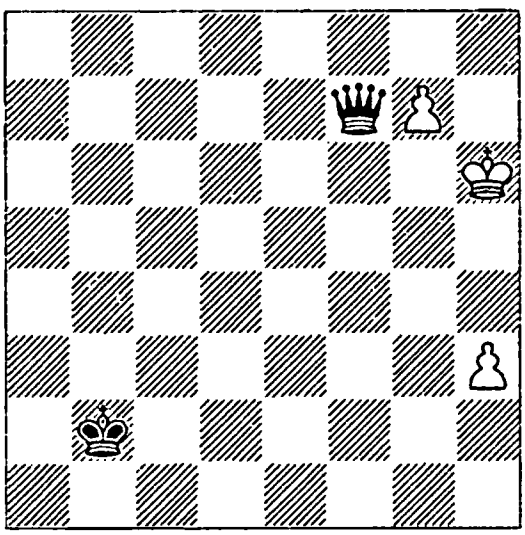
2 ♔h7 ♕h5+ 3 ♔g8 ♕xh3 leads to a simple technical win.

2...♔d4

Nothing wrong so far.

3 h5

B



Fenske – Okrajek
East Germany 1973

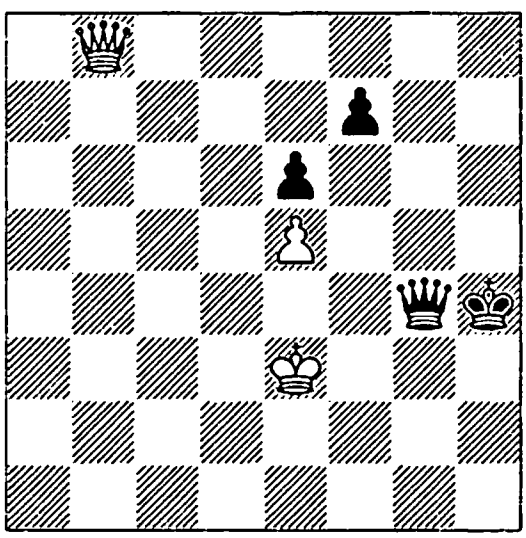
Now Black should take care; the winning line is 3...♕g8! 4 ♔g6 ♔e5 5 h6 ♔e6 6 h7 ♕f7+ 7 ♔h6 ♕f6+ and White loses both of his pawns.

3...♔e5?? 4 g8♕! ♕xg8 ½-½

Stalemate.

The next position also features a stalemate that could have been avoided had Black noticed it in time.

W



Jevtić – Vujačić
Belgrade 2008

This position is lost for White. He is a pawn down, which is not fatal in itself, but additionally his e-pawn is weak. This means that Black can manoeuvre his king to f4 or f5 and eventually either win the e-pawn outright or force a liquidation to a winning ♕+♙ vs ♕ position.

1 ♕c7

Defending the pawn from h8 is no better since after 1 ♕h8+ ♔g3 2 ♕f6 ♕f5 3 ♕g7+ ♕g6 4 ♕h8 ♕g5+ 5 ♔d3 ♔f4 6 ♔d4 ♕g1+ 7 ♔c4 ♔e4 8 ♕h7+ ♕g6 9 ♕h8 ♕f5 the e-pawn is surrounded and Black will soon be able to force a decisive liquidation to a ♕+♙ vs ♕ position.

1...♕g5+ 2 ♔f3 ♕f5+ 3 ♔e3 ♔g3

With his f-pawn securely defended by the queen, Black's king takes the first step towards the e-pawn.

4 ♕b8 ♕f3+ 5 ♔d2

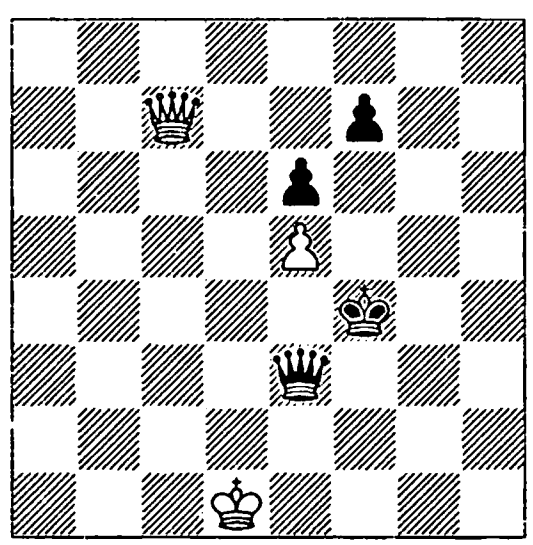
5 ♔d4 ♔f4 6 ♕g8 ♕d5+ and Black wins the e-pawn with check.

5...♔f4

Threatening to win by ...♕d5+ or ...♕e3+, so White counterattacks the undefended f7-pawn.

6 ♕c7 ♕e3+ 7 ♔d1 *(D)*

B



Now we come to an important moment, concerning which the computer and the over-the-board player probably have different opinions.

7...♕d4+

The computer points out that 7...♕xe5 8 ♕xf7+ ♔e3 wins, but the over-the-board player reacts with horror on being informed that he can mate in 81 moves from this position. Distance to mate and difficulty often go hand in hand, and this position is certainly not easy to win. Indeed, it is surprising that it is a win at all given that the pawn is only on the third rank and White's king is in front of the pawn. However, thanks to the initially unfavourable position of

the white queen (there are no viable checks as ♕a7+ loses to ...♕d4+) White's king cannot stay where it is and is soon driven to the side; for example, 9 ♕g8 ♕d5+ 10 ♔c1 ♕h1+ 11 ♔b2 ♕e4 12 ♕g1+ ♔e2 13 ♕h2+ ♔d3 14 ♕g3+ ♕e3 15 ♕g6+ ♔d2 16 ♕c2+ ♔e1 17 ♕b1+ ♔f2 18 ♕h7 e5 and the pawn takes the first step forwards. The general theory of queen and pawn against queen tells us that this position is probably winning, because with a centre pawn there is no drawing zone for the white king in a remote corner, and if the defender's king cannot move in front of the pawn then his chances are grim.

The over-the-board player is probably more interested to know if Black can win in the above diagram without extreme technical difficulties, but against accurate defence Black will probably in the end have no choice but to enter a line similar to the above; for example, 7...♕d3+ 8 ♔c1 (8 ♔e1 ♔e3 9 ♕c1+ ♔d4 is easier for Black as 10 ♕c7 is met by 10...♕c3+) 8...♕f5 (now the white queen is paralysed, since only on c7 can it prevent the capture of the e-pawn by king or queen) 9 ♔d2 ♔e4 and now:

1) After 10 ♔e1? ♕xe5 11 ♕xf7 ♕g3+ 12 ♔e2 ♕e3+ Black forces a decisive exchange of queens.

2) 10 ♔e2?! ♕f4 (now White is in zugzwang) 11 ♕b7+ (11 ♔e1 f6 is winning for Black, so White gives up the pawn at once) 11...♔xe5 12 ♕c7+ (it's not perpetual check) 12...♔e4 13 ♕b7+ ♔d4 14 ♕a7+ (14 ♕b6+ ♔c4 is similar) 14...♔d5 15 ♕b7+ ♔c4 16 ♕c6+ ♔b4 17 ♕b6+ ♔c3 18 ♕a5+ ♕b4 19 ♕e5+ ♔b3 20 ♕e3+ ♔c2 21 ♕d3+ ♔b2 and the checks run out, leaving Black two pawns ahead.

3) 10 ♔d1! intends to meet 10...♕f4 by 11 ♔e2. In this case I do not see anything better for Black than to exchange the e5- and f7-pawns, with a difficult win similar to that after 7...♕xe5 above.

8 ♔c1 ♕a1+

Black is not sure how to proceed. He doesn't want to take on e5, this time with good reason since with the king on c1, 8...♕xe5? 9 ♕xf7+ ♔e3 10 ♕a7+! is a draw.

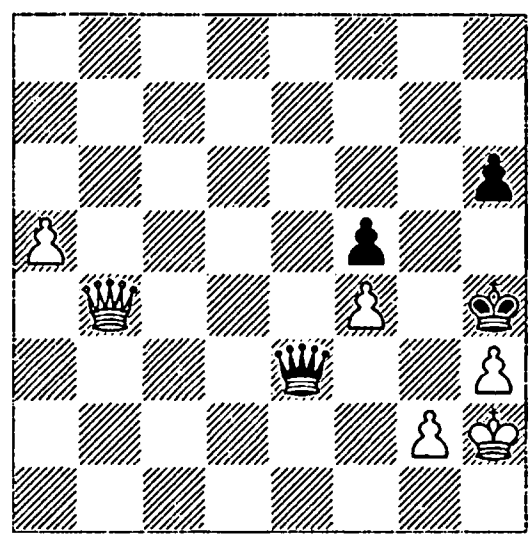
9 ♔d2 ♕b2+ 10 ♔d1

Up to here Black hasn't done anything seriously wrong, and at this point he could still win by 10...♕xe5 11 ♕xf7+ ♔e3, with the very long win mentioned above. Instead, he plays to threaten mate and thereby falls into a nasty trap.

10...♔e3? 11 ♕c3+! ½-½

Stalemate is unavoidable.

In some cases, the stalemate doesn't initially exist and the defender must first set it up.



Dambacher – Van Eijk
Tilburg 2006

White is two pawns up and the win might appear to be completely straightforward, but he faces two problems. The first is the possibility of perpetual check by Black and the second is the appearance of stalemate. In the game White took steps against the first danger, but not the second.

1 ♕b1?

This allows Black to draw. The win requires surprising accuracy by White: 1 a6! ♕g3+ (1...h5? 2 ♕e7+! mates) 2 ♔h1 ♕e3 (intending ...h5 and an eventual stalemate by sacrificing the queen on g2) 3 ♕b1! (this is the correct moment for ♕b1, because now that the white king is on h1, Black cannot gain a tempo by checking on g3) 3...h5 4 ♕a1! (a further accurate move, preparing a check on f6 to drive Black's king out of the stalemate net) 4...♕d2 (Black has set up the stalemate and is now threatening to sacrifice on g2) 5 ♕f6+! ♔g3 6 ♕g5+ ♔f2 7 ♔h2 and now it's all over. Black's counterplay has been nullified and White is ready to chase Black's king even further away with ♕g3+ and

♕f3+, after which White's material advantage will prove decisive.

1 ♕b6 ♕xf4+ 2 ♔h1 may also win, but is far more complicated.

1...h5!

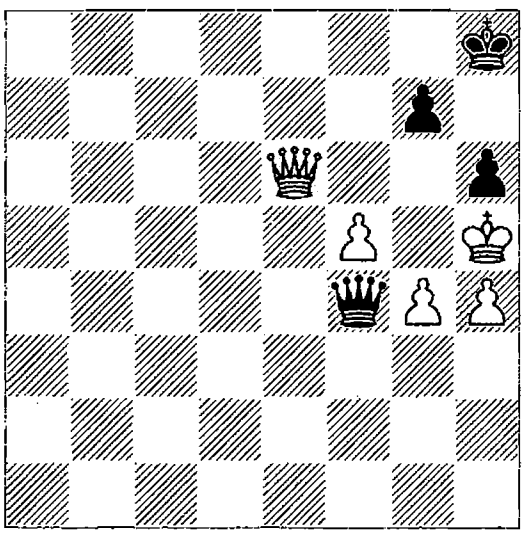
Setting up the stalemate. Now it's a dead draw as White has no checks and there is nothing he can do to prevent Black from playing ...♕g3+ followed by ...♕xg2+.

2 ♕b6 ♕g3+ 3 ♔h1 ♕xg2+ 4 ♔xg2 ½-½

Stalemate.

I believe most players have the impression that stalemates are quite rare, even in queen endings. This impression is partly the result of many stalemates being overlooked; if all stalemating opportunities were taken, players might have a different view. In the next position, White was on the verge of success when he overlooked a stalemate.

W



V. Scherbakov – Arlazarov
USSR 1972

In general, the ending of queen and three pawns against queen and two pawns, with all the pawns on the same side, should be a draw, but in practice there are some winning chances. This position represents an especially favourable case because White's king is actively placed and his pawns are already quite far advanced, and indeed White can win by force.

1 f6!

A good move, and just as strong as the alternative win 1 g5! hxg5 2 ♔g6 ♕b8 3 hxg5 ♕d8 4 ♕c6 followed by ♕h1+.

1...♔h7

After 1...gxf6 2 ♔g6! White mates in a few moves, so this is forced.

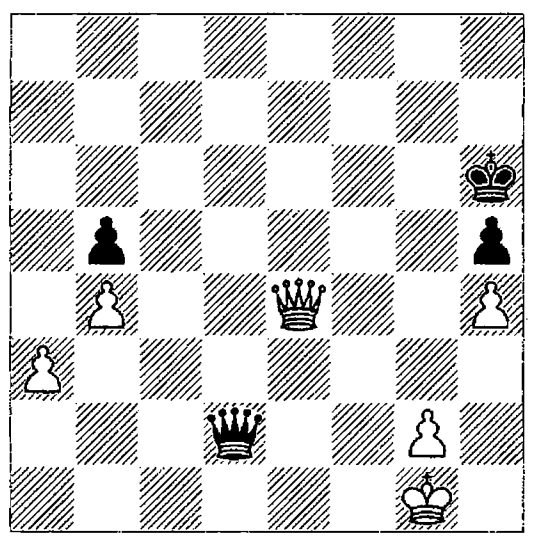
2 fxg7?

White overlooks a stalemate trick and throws away half a point. He had two possible wins: 2 f7! ♕e5+ 3 g5 ♕xe6 4 f8♘+! winning a piece, or 2 ♕f5+! ♕xf5+ 3 gxf5 (this is a winning king and pawn ending) 3...gxf6 4 ♔g4 ♔g7 5 ♔f4 ♔f7 6 ♔e4 ♔e7 7 ♔d5 ♔d7 (7...h5 8 ♔c6 is also lost for Black) 8 h5 and White seizes the opposition.

2...♕f7+! ½-½

The trick in the next position is perhaps more difficult to see in advance.

B



Boljos – R. Marić
Yugoslavia 1970

White is two pawns up, but as yet he has no passed pawn so he still has a little work to do before he can claim a full point.

1...♕d1+ 2 ♔h2 ♕d6+ 3 ♔h3

White could also have played 3 g3 ♕d2+ 4 ♔h3 ♕d7+ 5 ♔g2 ♕d2+ 6 ♔f3 ♕d1+ 7 ♔e3 ♕c1+ 8 ♔e2 ♕b2+ 9 ♔f3 with a winning position, since Black runs out of checks.

3...♕d7+ 4 g4?!

4 ♔g3 ♕g7+ 5 ♔f3 is much simpler, stopping Black's checks without making any compromises. Once White takes over the initiative, Black has no chance.

4...hxg4+ 5 ♔g3

5 ♕xg4 ♕d3+ 6 ♔g2 ♕d2+ 7 ♔f1 might still win, but gives Black unnecessary counterplay.

5...♕d6+ 6 ♕f4+? *(D)*

Throwing away half a point. 6 ♔xg4 wins; for example, 6...♕d7+ 7 ♔f4 ♕f7+ 8 ♕f5 ♕c7+ 9 ♔e4 ♕c4+ 10 ♔e5 ♕c7+ 11 ♔d5 ♕b7+ 12 ♔c5.

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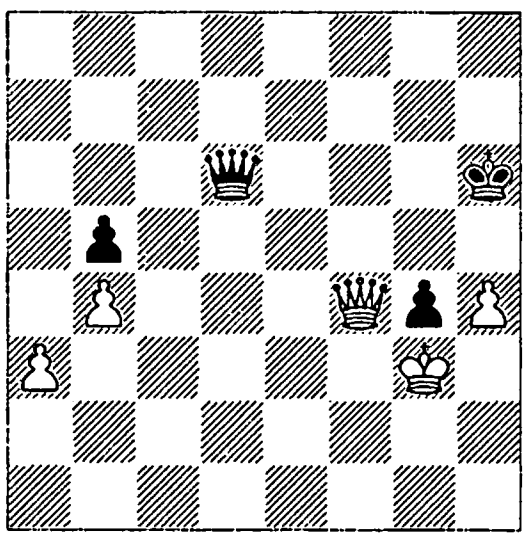
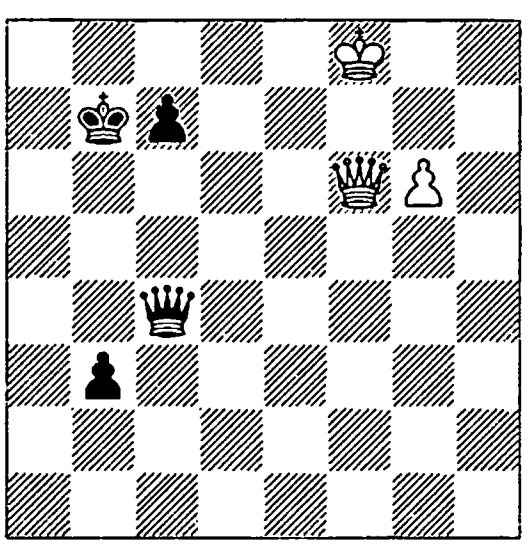


6...♔h5! ½-½

This stalemate trick saves the day; indeed, 7 ♕xd6 is the only move not to lose for White!

Stalemates aren't always missed. The following example, which ends with a spectacular double queen sacrifice, is remarkable because both players conducted the endgame accurately.

W



Lechtynsky – B. Maksimović
Vrnjačka Banja 1987

Both sides have an advanced passed pawn, but Black has an extra c-pawn which not only shields his king from checks, but also gives rise to opportunities to liquidate into a winning ♕+♙ vs ♕ ending. Since the diagram can easily reduce to a position of ♕+c♙ vs ♕, it's worth reviewing the basic principles of this ending. The c-pawn is the most favourable pawn to have in an ending of ♕+♙ vs ♕ (the same comment applies to the f-pawn, of course), and indeed ♕+c♙ vs ♕ is generally won if the defender cannot bring his king in front of the pawn. Thus, if such an ending is reached, the result will in general be a win for Black unless White has an immediate forced draw

1 g7

The only chance. 1 ♕f3+? c6! makes no sense as now the white queen is not covering the b2-square. After 2 g7 b2 3 g8♕ ♕xg8+ 4 ♔xg8 b1♕ we have the type of lost ending mentioned above (one should note that although a position such as this is lost, the win is by no means easy; for example, the tablebase reveals that it takes Black 70 moves to force mate in this case).

1...♕b4+

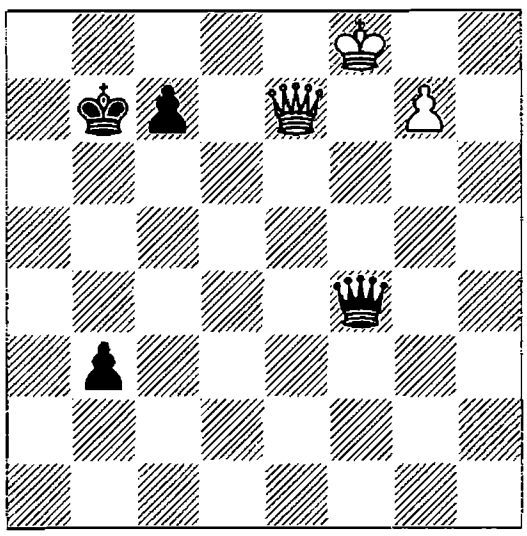
1...♕c5+ 2 ♕e7 is similar.

2 ♕e7!

2 ♔e8 also draws after 2...b2 3 g8♕ ♕e4+ 4 ♕e7! (4 ♔d7? ♕d3+! 5 ♔e8 b1♕ 6 ♕ge6 ♕bc2 wins for Black as White cannot prevent an exchange of queens, leading to a lost ♕+♙ vs ♕ ending) 4...b1♕ 5 ♕b3+! (the only drawing move) 5...♕xb3 6 ♕xe4+ ♔b6 (6...c6 7 ♕e7+ ♔b6 8 ♕d8+ ♔b5 9 ♕b8+! ♔c4 10 ♕f4+ is also a draw as Black cannot easily escape the checks) 7 ♔d7! (in this special case, the white king is close enough to cause trouble) 7...♕f7+ 8 ♔c8 c5 (Black pushes his pawn, but his pieces are not well-coordinated and White can give an effective barrage of checks) 9 ♕b1+! ♔c6 10 ♕e4+! ♕d5 11 ♕g6+! ♔b5 12 ♕b1+ ♔a4 13 ♕a1+ ♔b4 14 ♕e1+! and by checking on the correct square every time White manages to hold the game.

2...♕f4+!? *(D)*

A better try than 2...♕xe7+ 3 ♔xe7 b2 4 g8♕ b1♕ 5 ♕d5+ (the only move to draw as White must exploit the decentralized enemy queen to cause trouble immediately) 5...c6 (5...♔b6 6 ♕d4+ c5 transposes) 6 ♕d7+ ♔b6 7 ♕d4+ and White draws since after 7...c5 8 ♕d6+ Black must give up the pawn to avoid losing his queen.

W 

3 ♔e8

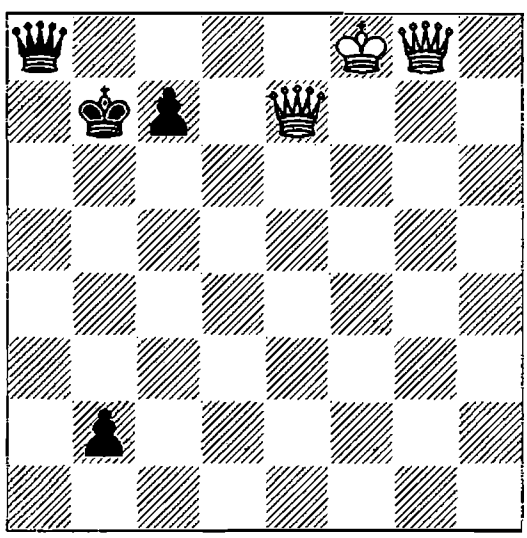
It looks unnatural to block the pawn with the king by 3 ♔g8?!. Although there is no forced win for Black, the position after 3...b2 4 ♕e1 c5 5 ♕d1! looks more uncomfortable for White than the game.

3...♕a4+ 4 ♔f8

4 ♕d7 also draws, but the move played, which sets up a stalemate possibility, is certainly more spectacular.

4...b2 5 g8♕ ♕a8+! *(D)*

Black does his best to play for a win. The immediate 5...b1♕ is met by 6 ♕xc7+! ♔xc7 7 ♕h7+!, forcing stalemate.

W 

6 ♕e8

The only move. 6 ♔f7? ♕xg8+ 7 ♔xg8 b1♕ is winning for Black as White has no checks and therefore Black has the chance to consolidate his advantage.

6...♕a3+

6...♕xe8+ 7 ♔xe8 b1♕ 8 ♕d5+ is basically the same draw as in the note to Black's second move.

7 ♕e7 ♕f3+ 8 ♔e8 b1♕

8...♕c6+ 9 ♕d7 b1♕ 10 ♕xc6+ ♔xc6 11 ♕c4+ is also a draw.

9 ♕xc7+!

The only move to draw and a spectacular finish.

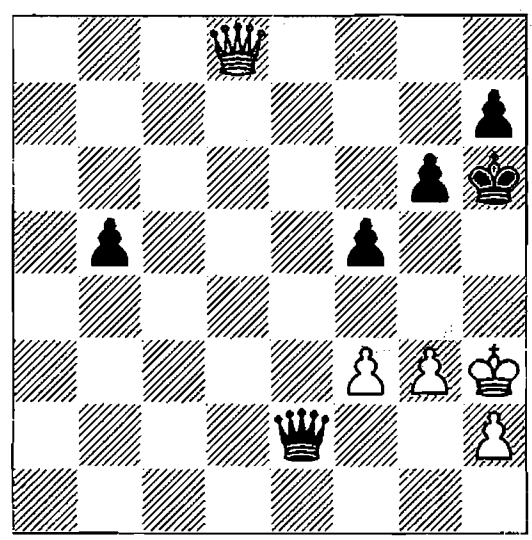
9...♔xc7 10 ♕h7+! ½-½

Summary:

- Stalemate occurs relatively often in queen endings.
- Many stalemates could be avoided, but the attacker is often oblivious to the danger until it is too late.

7.3 Mating Attack

Mating possibilities can also easily arise in queen endings.

B 

Afek – Ashley
Budapest 1997

This is a curious position because both kings are in a rather exposed position, although neither is subject to any immediately decisive threats since ...♕f1+ may be met by ♔h4, and ♕f8+ by ...♔h5. Black certainly has the advantage in that while the situation on the kingside is fairly balanced, he has an outside passed pawn on the queenside. However, the win is not so simple as merely playing 1...♕xf3 because then White

draws by 2 ♕g5+! ♔g7 3 ♕e7+, exploiting a stalemate possibility.

1...b4!

The best way for Black to make progress is to offer the b-pawn; if White takes it then his queen will be unable to defend the kingside effectively, and Black will secure a vicious attack against the white king. Despite Black's advantage, the position is not yet winning for him.

2 ♕h4+

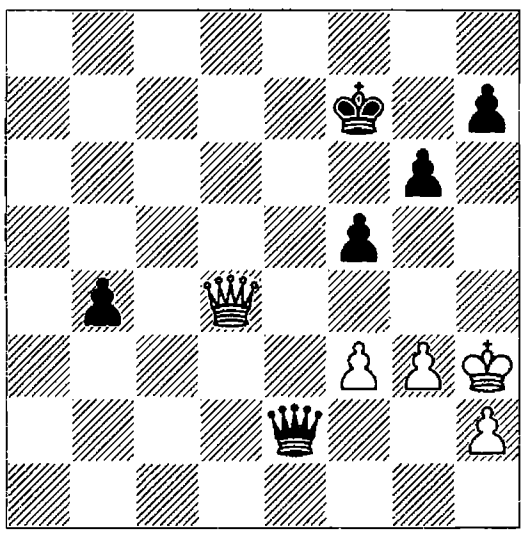
Not 2 ♕f8+? ♔h5 with a quick mate to follow.

2...♔g7 3 ♕d4+

White continues checking for the moment.

3...♔f7 *(D)*

W



4 ♕xb4?

Accepting the offer is wrong, as now Black has a forced win. There were two better plans of defence:

1) 4 ♕h8!? plays to win the h-pawn. The cost is that Black's b-pawn can advance further, although there does not seem to be any forced win for him. After 4...♕f1+ 5 ♔h4 ♕c4+ 6 ♔h3 b3 7 ♕xh7+ ♔f6 8 ♕h8+ ♔e7 9 ♕g7+ ♔d8 10 ♕f8+ ♔c7 11 ♕g7+ ♔b6 (Black cannot avoid giving up more material if he wants to make progress) 12 ♕xg6+ ♕c6 13 ♕xf5 b2 14 f4 Black's pawn is only one square from promotion, but it's still not clear if he can win. If Black plays his queen to c1 to support the pawn, then his king is bombarded by checks. White's pawns are useful for shielding his king, so Black is denied the possibility of interposing his queen with check, an idea which often wins in such positions.

2) 4 ♕d5+ ♕e6 5 ♕b7+ ♕e7 6 ♕d5+ ♔f6 7 ♕d4+ ♔e6 8 ♕c4+ ♔d7 9 ♔g2 is an alternative plan, in which White remains a pawn down but for the moment prevents Black from advancing his pawn. It will not be easy for Black to make progress in view of the exposed situation of his king.

4...g5!

Threatening mate in one. White has no choice but to retreat his queen to a passive position.

5 ♕b1

White loses quickly after 5 ♕b3+ ♔g7 6 ♕b7+ ♔g6 7 ♕c6+ ♔h5.

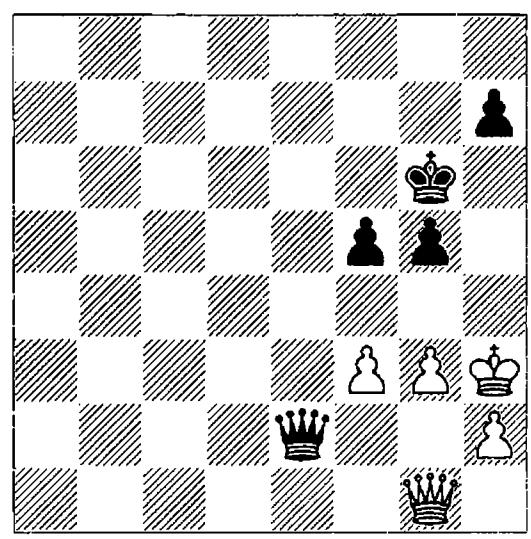
5...♔g6

Threatening ...♔h5 followed by ...g4+, mating.

6 ♕g1 *(D)*

As good or bad as anything else. 6 ♕h1 h5 also leads to a quick mate.

B



6...♔h6?!

This is given a double exclamation mark and the 'only move' symbol by Afek in his *Informator* notes. It is sufficient to win, but Black could have decided the game at once by 6...g4+! 7 fxg4 fxg4+ 8 ♔h4 ♕b5, mating after 9 ♔xg4 ♕f5+ 10 ♔h4 ♕h5#.

7 ♕h1

White is now threatening to save the game by playing g4, so Black's reply is forced.

7...♔h5 8 g4+ fxg4+ 9 ♔g3

The only way to avoid mate, but now Black can liquidate into a won king and pawn ending.

9...♕xf3+ 10 ♕xf3 gxf3 11 ♔xf3 ♔h4 12 ♔g2 ♔g4 13 h3+

Or 13 ♔g1 ♔h3 14 ♔h1 g4 15 ♔g1 h6! (not 15...h5? 16 ♔h1 h4 17 ♔g1 g3 18 hxg3 hxg3 19 ♔h1 and the position is drawn) 16 ♔h1 h5 17 ♔g1 h4 18 ♔h1 g3 19 hxg3 hxg3 20 ♔g1 g2 and Black wins.

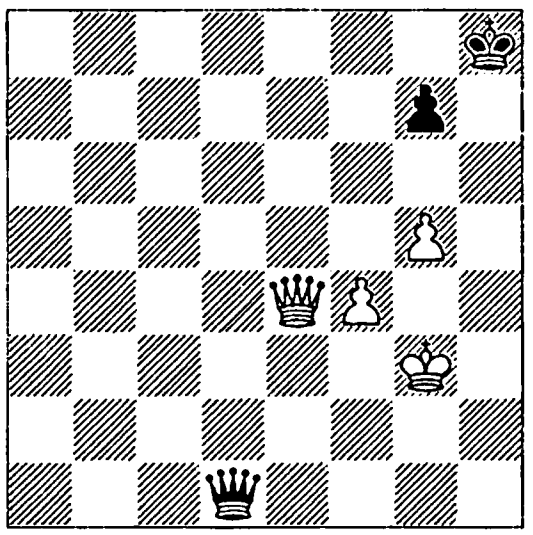
13...♔f4 14 ♔f2 h6 15 ♔g2 h5 16 h4

After 16 ♔f2 h4 Black has the opposition and wins the h-pawn.

16...g4 17 ♔h2 ♔f3! 0-1

Followed by ...♔g3 and ...♔xh4, with an easy win.

A poorly placed king can prove fatal in a situation that would otherwise be drawn. Mating threats play a large part in the next example, but oddly the game is eventually decided instead by stalemate.



Stoček – Womacka
European Ch, Dresden 2007

Normally an ending with queen and two pawns against queen and pawn, with all the pawns on the same side, would be a draw. However, this is a special situation because Black's king is very badly placed in the corner and White can set up decisive mating threats by advancing his g-pawn.

1 g6!

The only winning move, but White must take some care as there are stalemate possibilities.

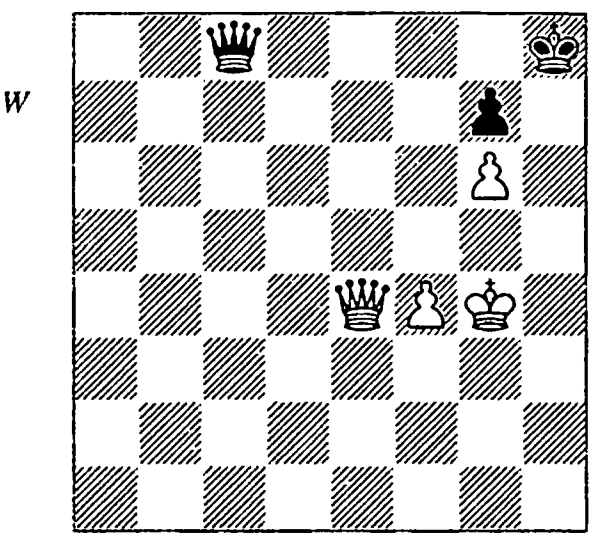
1...♕b3+?!

This should lose relatively quickly. Black could have put up more of a fight by 1...♕g1+ 2 ♔h3 ♕f1+ 3 ♕g2 ♕a6 but White wins all the same after 4 ♔h2! (introducing a new threat of 5 ♕h3+) 4...♕a2 5 ♔g3! ♕b3+ 6 ♔h4 ♕a4 (or 6...♕b8 7 ♔g4 ♕c8+ 8 ♔g3 ♕e8 9 ♕h1+ ♔g8 10 ♕h7+ ♔f8 11 ♕h8+ ♔e7 12 ♕xe8+ ♔xe8 13 ♔f3 ♔e7 14 ♔e4 with a winning king and pawn ending) 7 ♕f3 ♕a2 8 ♕h5+ ♔g8 9 ♕h7+ ♔f8 10 ♕h8+ followed by an exchange of queens or capture of the g-pawn with check.

2 ♔h4 ♕b8 3 ♔g4?!

Creating unnecessary complications. 3 ♕f5! ♕d8+ 4 ♔g3 would have won almost at once; for example, 4...♔g8 5 ♕e6+ ♔h8 6 ♕h3+ ♔g8 7 ♕h7+, etc.

3...♕c8+ *(D)*



4 ♕f5?

Throwing away the win. 4 f5 was one route to victory; for example, 4...♕c4 5 ♕f4 ♕e2+ 6 ♔h4 ♕e1+ (6...♕e8 7 ♔g3 ♕e1+ 8 ♔h3 ♕h1+ 9 ♕h2 and 6...♕b2 7 ♔h3 ♕c3+ 8 ♔g4 also win) 7 ♔h3 ♕h1+ (7...♕c3+ 8 ♔g4 ♕c4 9 ♔g5 and White wins) 8 ♕h2 and Black is defenceless.

4...♕e6!

Presumably White overlooked this collinear move; by exploiting the stalemate, Black almost paralyses the white pieces.

5 ♔g5

The only way to play on.

5...♕e7+?!

A slip, which doesn't lose but which creates unnecessary problems for Black. The simple 5...♕d5! would have drawn at once, since White

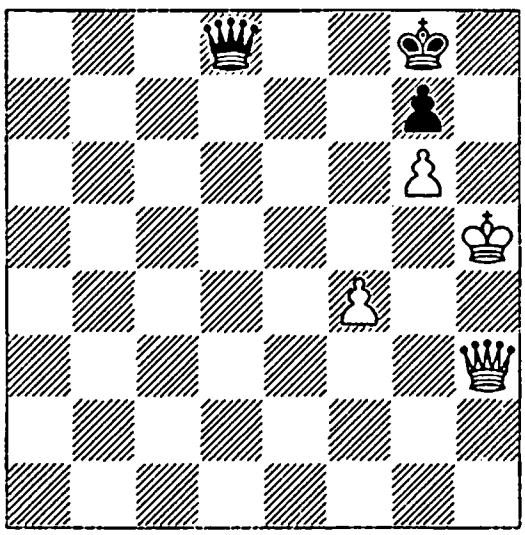
cannot win the king and pawn ending after 6 ♕e5 ♕xe5+ 7 fxe5 ♔g8 8 ♔f5 ♔f8.

6 ♔h5 ♕d8 7 ♕h3 ♔g8!

The only move. Although White still retains a clear advantage, the unfortunate position of his king means that it isn't easy for him to generate threats along the h-file.

8 ♕e6+ ♔h8 9 ♕h3 ♔g8 *(D)*

W



10 ♕f3

10 ♕b3+ ♔h8 11 ♕f3 ♔g8 12 f5 is a good try, but Black can hold on by 12...♔f8! 13 ♕a3+ ♔e8! (not 13...♔g8?, allowing White to win by 14 ♕b3+ ♔h8 15 ♕a4 ♕c8 16 ♔g5 ♕c1+ 17 ♕f4 ♕g1+ 18 ♔h4 ♕h1+ 19 ♔g3 ♕g1+ 20 ♔h3 ♕h1+ 21 ♕h2) 14 ♕e3+ ♔f8 15 ♕c5+ ♔e8 and White cannot make progress.

10...♔h8?

Allowing White to remove his king from the h-file and obtain a winning position. 10...♔f8! is the only defence, moving the king out from the vulnerable position near the corner, after which Black can draw.

11 f5

This wins, but it is a little simpler to play 11 ♔g4 ♕d7+ 12 ♔g3 ♕d5 13 ♕e2 ♕b3+ 14 ♔h4, when Black cannot prevent the queen from arriving at either h5 or e8.

11...♕b8

Or 11...♕d5 12 ♔g4 ♕d4+ 13 ♔h3 ♕d5 14 ♕h5+ and White wins.

12 ♔g5

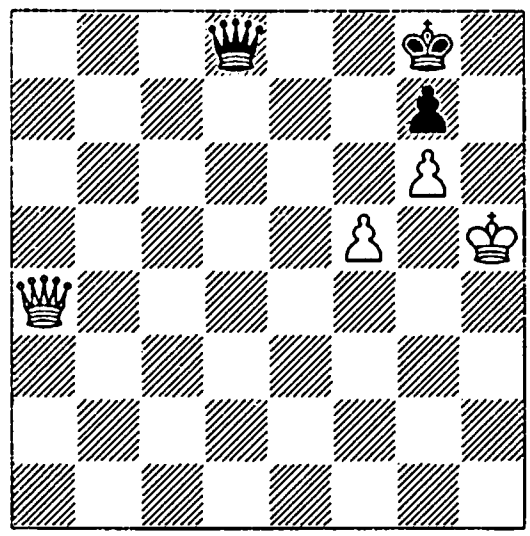
Again, a simpler win was possible: 12 ♔g4 ♕b4+ 13 ♕f4 ♕c4 14 ♔g5 and the white queen reaches the h-file.

12...♕d8+ 13 ♔h5 ♔g8

In view of the win given in the previous note, it was probably a good idea for Black to try something different, forcing White to do some more work in order to win.

14 ♕b3+ ♔h8 15 ♕a4 ♔g8 *(D)*

W



16 ♔g4?

White slips up just when he was very close to a win. After 16 ♕c4+ ♔h8 17 ♕h4 Black cannot avoid a discovered check from White's king.

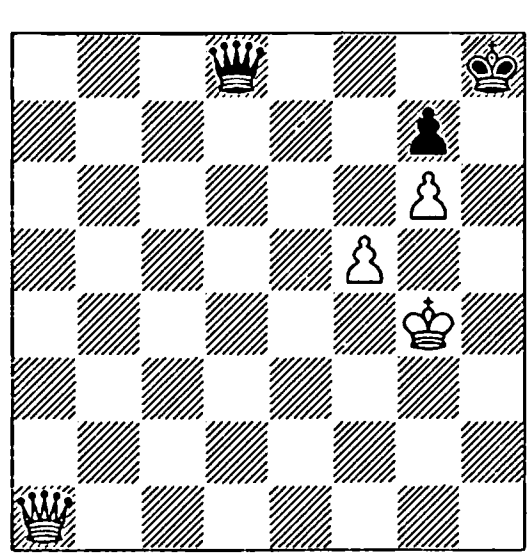
16...♔h8?

Handing the half-point back again. The only drawing line is 16...♔f8! 17 ♕b4+ ♔e8, when White cannot get anywhere.

17 ♕a1 *(D)*

17 ♕e4 ♕d1+ 18 ♔h4 ♕d8+ 19 ♔h3, followed by ♕h4+, is simplest.

B



17...♕d5 18 ♕c3?

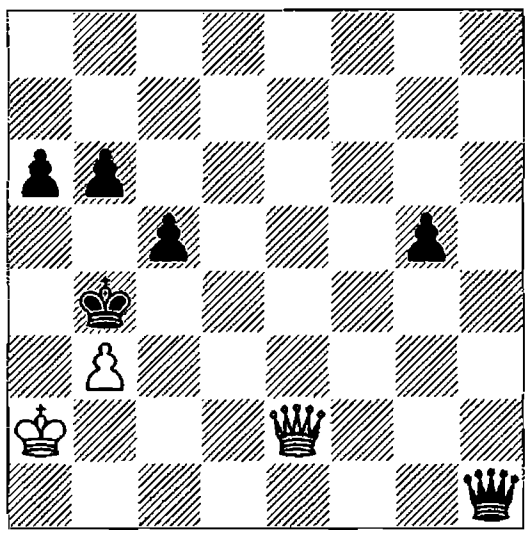
White makes the last mistake. 18 ♕e1! was one way to win: 18...♕g2+ (18...♕d4+ 19 ♔h5 ♕d7 20 ♕e4 ♕c8 21 ♔g5 ♕c1+ 22 ♕f4 ♕g1+ 23 ♔h4 transposes) 19 ♔f4 ♕h2+ 20 ♕g3 ♕d2+ 21 ♔g4 ♕e2+ 22 ♕f3 ♕c4+ 23 ♔g5 ♕c1+ 24 ♕f4 ♕g1+ 25 ♔h4 ♕h1+ 26 ♔g3 ♕g1+ 27 ♔h3 ♕h1+ 28 ♕h2 and Black is defenceless.

18...♕c4+! 19 ♕xc4 ½-½

Stalemate.

In the next position Black is as many as three pawns ahead, but this doesn't mean that the win will be simple.

B



Prié – G. Georgadze
Andorra la Vella 1997

Black's problems are the exposed position of his king and his offside queen, which make it hard to deal with White's threats, the most immediate of which is mate in two by ♕c4+. Black can win, but it requires considerable care.

1...♕d5?

Black falls at the first hurdle. In general, it is better to have a centralized queen than one stuck in the corner, but concrete calculation shows that White can now deliver perpetual check. Black had two better moves:

1) 1...♕c1? is also wrong and allows White to draw thanks to a stalemate possibility: 2 ♕e4+ c4 (2...♔c3 3 ♕e5+ leads to perpetual check after 3...♔c2 4 ♕f5+ ♔d1 5 ♕g4+ ♔e1 6 ♕g1+ or 3...♔d3 4 ♕d5+ ♔e2 5 ♕g2+) 3 ♕e7+ ♔a5 4 b4+ ♔a4 5 ♕d7+ ♔xb4 (5...b5 6 ♕xb5+) 6 ♕d6+ ♔c3 7 ♕d3+! with perpetual check or stalemate.

2) 1...♔a5 is sufficient to win; there is now no perpetual check and White has nothing better than 2 ♕d2+ ♔b5 3 ♕d3+ ♔c6 4 ♕g6+ ♔b7 5 ♕g7+ ♔b8 6 ♕e5+ ♔a7 7 ♕xg5, when Black remains two pawns ahead and should win with careful play.

3) 1...♕h4! is the strongest continuation since after 2 ♕d2+ ♔b5 3 ♕d7+ ♔a5 4 ♕d2+ ♕b4 5 ♕xg5 a similar situation exists to that after 1...♔a5, but here Black's king is more actively placed and this should make the win simpler.

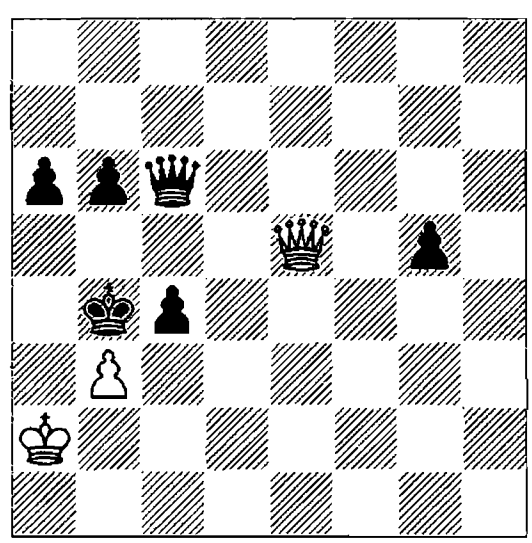
2 ♕e1+

Now Black cannot escape from the checks.

2...♔b5 3 ♕e8+ ♔b4 4 ♕e1+ ♔b5 5 ♕e8+ ♕c6 6 ♕e2+ c4 7 ♕e5+ ♔b4 *(D)*

Or 7...♕c5 8 ♕e8+ ♔b4 9 ♕e1+ and Black must return to b5 since 9...c3?? even loses after 10 ♕e4+ ♔b5 11 ♕a4#.

W



8 ♕e7+ ♔a5??

A horrible blunder after which Black loses his queen. He had to be content with a draw after 8...♕c5 9 ♕e1+ or 8...♔c3 9 ♕e3+ ♔c2 10 ♕e2+.

9 ♔a3! 1-0

There's no way out as 9...♕c5+ (9...b5 10 ♕d8+ ♕b6 11 b4#) 10 b4+ costs Black his queen.

Summary:

- Mating attacks are feasible in queen endings if the defender's king is poorly placed.

- Many positions in which mate is a possibility also contain stalemate ideas, and it is necessary to be alert for surprising tactical twists in order to play such positions accurately.
- Sometimes players don't even consider the possibility that they might lose, especially if they have a material advantage, and so miss a mating idea by the opponent.

7.4 Queen and Pawn vs Queen

This is the trickiest of all five-man endings, which is unfortunate as it is also one of the most common to arise in practice. Although the database for this ending has been available for many years, progress on actually understanding it has been rather slow, even though many general principles are now clear.

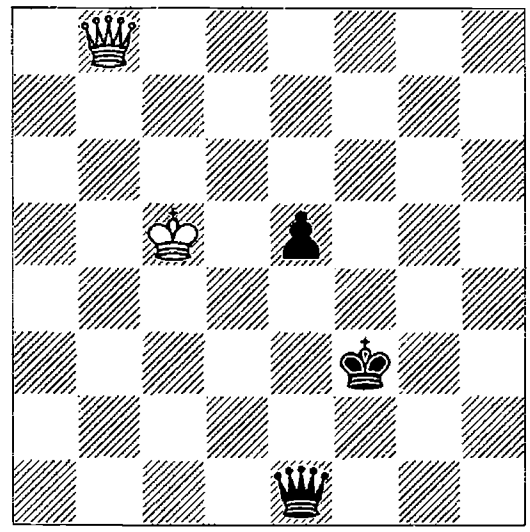
To summarize the main points:

- With a centre pawn, the defender has two drawing possibilities: either to get his king in front of the pawn or, if we suppose that White has an e-pawn, to get his king to the h8-corner (the a8-corner is no good). If the defender cannot achieve either of these, then he generally loses.
- With a bishop's pawn, the defender's only real chance is to try to get his king in front of the pawn.
- With a knight's pawn, the defender must either bring his king in front of the pawn or, if we suppose that White has a b-pawn, get his king to the h1-corner.
- ♕+a♙ vs ♕ is generally drawn. If the defender (let's again suppose this is Black) cannot get his king in front of the pawn, then playing the king to the h1-corner generally results in the simplest draw.

In all cases the defender has better chances the further back the pawn is, as he has more time to reach a drawing position.

Let's see how this works out in a couple of practical examples.

In general, a position such as that in the following diagram is lost. With a central pawn, if White's king cannot get in front of the pawn,



W

Gelfand – Shirov
Alekhine Memorial, Moscow 1992

his only chance is to play his king to the h1-corner. Since this corner appears unreachable, White's drawing chances depend entirely on exploiting the temporary offside position of Black's queen to create difficulties. It turns out that White can draw, but very precise play is necessary.

1 ♕f8+!

The only drawing move.

1...♔e2

1...♔g2 2 ♕g7+ ♔f1 3 ♕f6+ is also a draw as Black cannot interpose.

2 ♔d5!

Once again the only move.

2...♕a5+

2...♔d3 3 ♕a3+ and 2...♔d1 3 ♕f5 are immediate draws.

3 ♔e4 ♕c3!

The best chance, threatening both ...♕d4+ and ...♕e3+, with the result that White cannot keep his king in front of the pawn.

4 ♕d6?

This slip loses. The drawing line involves manoeuvring the white king towards the h1-corner, a feat which appeared impossible in the diagram position (see also diagram 78c in *Understanding Chess Endgames*). 4 ♕h6! is the only move to draw; after 4...♕d4+ 5 ♔f5 e4 (5...♔d3 6 ♕a6+ also draws) 6 ♕f4! ♕d5+ (6...♔d3 7 ♕f1+) 7 ♔g4 e3 8 ♔g3! White has arrived in the desired corner and can now hold the game; for example, 8...♕e6 9 ♕f3+ ♔d2 10 ♔g2 e2 11 ♕f4+ ♕e3 12 ♕b4+ ♕c3 13 ♕f4+

♔d1 14 ♕g4! and White can either pin the pawn or give a check barrage.

4...♕e3+ 5 ♔f5 e4 6 ♕h2+ ♔d3 7 ♕d6+ ♕d4 8 ♕a6+

8 ♕g3+ loses to 8...e3 as the white king is cut off from the h1-corner.

8...♔d2 9 ♕a2+ ♔e3 10 ♕b1

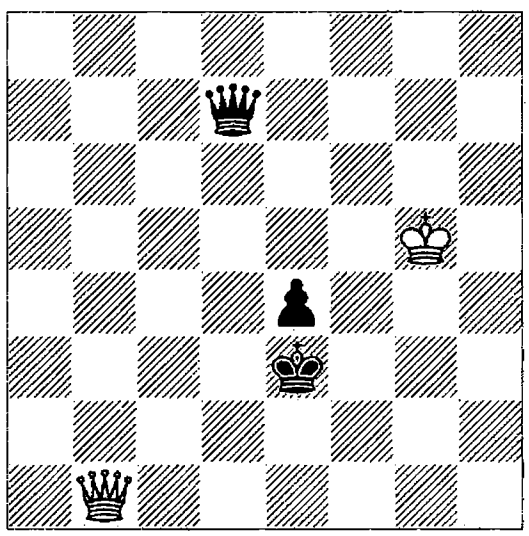
White puts up the maximum resistance. His king cannot move nearer h1 because after 10 ♔g4 ♕d1+ 11 ♔g3 (or 11 ♔h3) Black can exchange queens by 11...♕f3+ and ...♕f2+.

10...♕d7+!

The only move to win, preventing the king from moving to g4. 10...♕d5+? 11 ♔g4 is a draw.

11 ♔g5 *(D)*

Or 11 ♔e5 ♕e8+ 12 ♔d6 ♕g6+ 13 ♔c5 ♕f5+ 14 ♔b4 ♕f8+ 15 ♔c4 ♕c8+ 16 ♔d5 ♕f5+ 17 ♔c4 ♕e6+ 18 ♔c5 ♕e5+ 19 ♔c6 ♔f2 and Black has reached a typical winning position.



11...♕d3!

Shirov's play is very impressive. Again he finds the only move to win, which gains time by attacking the white queen. 11...♕g7+? 12 ♔h4 allows White to draw.

12 ♕g1+

12 ♕e1+ ♔f3 13 ♕h1+ ♔e2 14 ♕g2+ transposes.

12...♔e2 13 ♕g2+ ♔d1 14 ♕g1+

After 14 ♔f4 e3 Black's pawn is too quick.

14...♔c2 15 ♕c5+

15 ♔g4 e3 is also lost for White.

15...♕c3 16 ♕f5 ♕g3+ 17 ♔h6

The only square to avoid the exchange of queens, but after this White's king has no hope of reaching h1.

17...♕f3 18 ♕c5+

Now it's simple, as Black just has to play his king across to the h-file to stop White's checks.

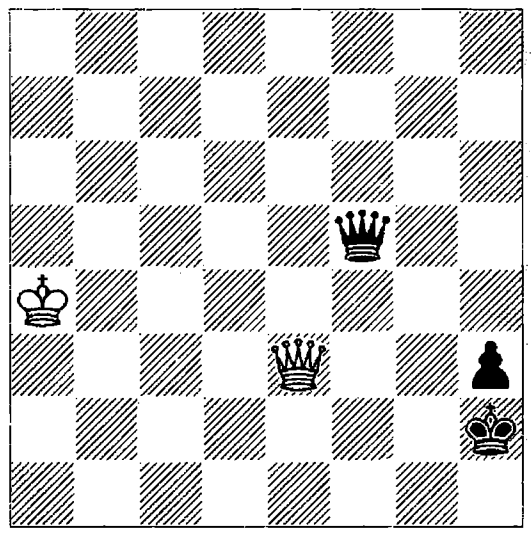
18...♔d2 19 ♕b4+ ♔e2 20 ♕b2+ ♔f1 21 ♕b1+ ♔g2 22 ♕b2+

After 22 ♕a2+ ♔g3 23 ♕g8+ ♔f2 24 ♕a2+ ♕e2 25 ♕f7+ ♔e1 the checks are also stopped.

22...♔h3 23 ♕b7 ♕f4+ 24 ♔h7 ♕h4+ 25 ♔g8 ♕g4+ 26 ♔h7 e3 0-1

Black wins after 27 ♕h1+ ♔g3 28 ♕g1+ ♔f4 29 ♕h2+ ♔f5 30 ♔h8 e2.

The following example features a rook's pawn, which generally offers the defender greater drawing chances than other pawns, although there are still some winning positions.



Ligterink – Smejkal
Amsterdam 1980

Here Black has two advantages: his pawn is far-advanced, and White's king is a long way from the 'safe' a8-corner.

1...♔g2

The most natural move, clearing the path of the pawn. The computer database shows that it is the only move to win.

2 ♕e2+ ♔g3 3 ♕e3+ ♔g4

A typical ploy by the attacker: Black plays his king onto the same rank as the opposing king, which cuts out any checks along the rank as that would result in the exchange of queens. This is one reason why the white king is poorly

placed on a4 and would be much better off further up the board.

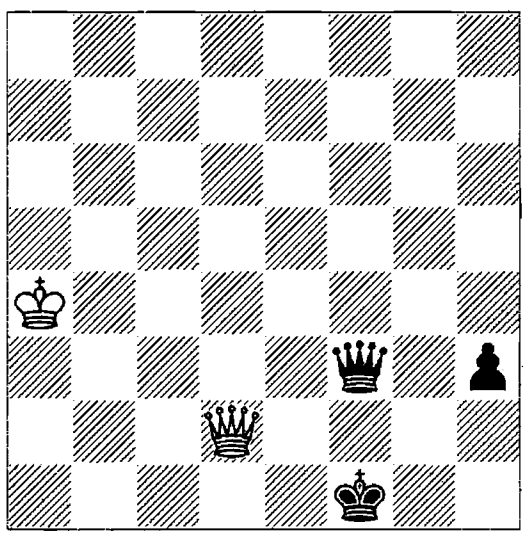
4 ♕e2+ ♕f3?!

Up to here Black has played correctly, but now inaccuracies start to creep in. The simplest way to make progress is by 4...♔g5 5 ♕e7+ (the only check) 5...♔f4! 6 ♕c7+ (6 ♕h4+ ♔f3 brings the checks to an end) 6...♕e5 7 ♕f7+ (after 7 ♕c1+ ♕e3 8 ♕c7+ ♔g4 9 ♕c8+ ♔g3 10 ♕g8+ ♔f3 the checks run out due to the interpositions on e4 and f4; this is another standard idea for the attacker, to play his king to the rank *adjacent* to the rank on which the enemy king lies, so as to be able to interpose with check) 7...♔g3 8 ♕b3+ ♔g2 9 ♕c2+ ♔f3 10 ♕d1+ ♕e2 11 ♕b3+ ♕e3 (once again, the key idea is to bring the queen to e3, so as to allow for interpositions on e4 or f4; White is then forced to check from the lower half of the board, where there is much less space) 12 ♕d1+ ♔g3 and there are no more checks. Next move Black will push the pawn to h2; although the win still takes some time, it is obvious that Black has made considerable progress by advancing his pawn to the seventh rank.

5 ♕e6+ ♔g3

Black tries the same idea of preventing checks from the upper half of the board, but this is only effective when his queen is on e3 and in the current position White can continue checking.

6 ♕e1+ ♔g2 7 ♕d2+ ♔f1 *(D)*



Black's last four moves were all inaccurate, and the combined effect of them has been to push the win up from 37 moves to a massive 72 moves.

8 ♕c1+ ♔e2 9 ♕b2+ ♔e1?

Black's misfortunes continue. Of his five legal moves, this is the only one not to maintain the win. 9...♔f1 10 ♕c1+ ♔f2 11 ♕c5+ ♕e3 was the correct way to proceed, although here the accurate defence 12 ♕d6! still leaves Black 70 moves away from victory.

10 ♕b4+?

10 ♕e5+! is obvious and good. White covers h2 with gain of tempo, and so gains time to move his king towards the 'safe' a8-corner; for example, after 10...♔f1 11 ♔a5 White is well on the way to a draw.

10...♔f1

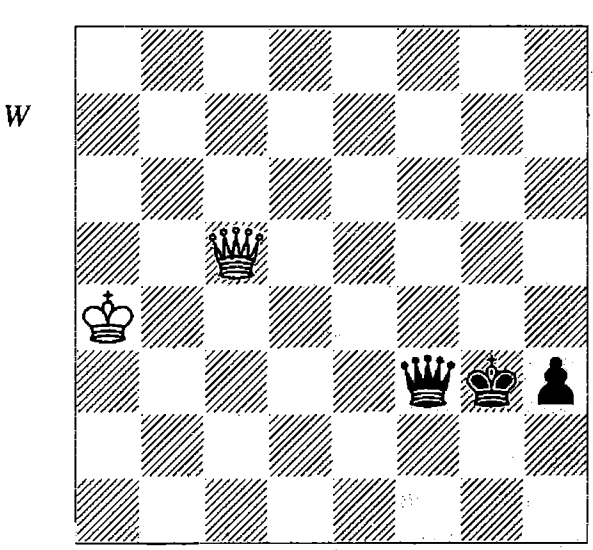
Black is now winning again, but at a distance of 72 moves the full point remains far away.

11 ♕b5+

The best check, as other moves allow Black to stop the checks far more quickly; for example, 11 ♕b1+?! ♔f2 12 ♕b6+ ♔g3 13 ♕g1+ ♔f4 14 ♕h2+ ♕g3 15 ♕d2+ ♕e3 16 ♕d6+ ♕e5 17 ♕d2+ ♔f3 18 ♕d1+ ♕e2 19 ♕b3+ ♕e3 20 ♕d1+ ♔g3 or 11 ♕c4+?! ♔g2 12 ♕c2+ ♔g3.

11...♔f2 12 ♕c5+ ♔g3? *(D)*

12...♕e3 is the way to make progress, although Black can only win by taking his king for a long walk, which starts 13 ♕d6 ♔g2 14 ♕g6+ ♔f3 15 ♕h5+ ♔g3 16 ♕g6+ ♔h4 17 ♕d6 ♔g5 18 ♔b5 ♕f4! 19 ♕d8+ ♔g4 20 ♕d1+ ♔h4 21 ♕e1+ ♔g5.



13 ♕g1+?

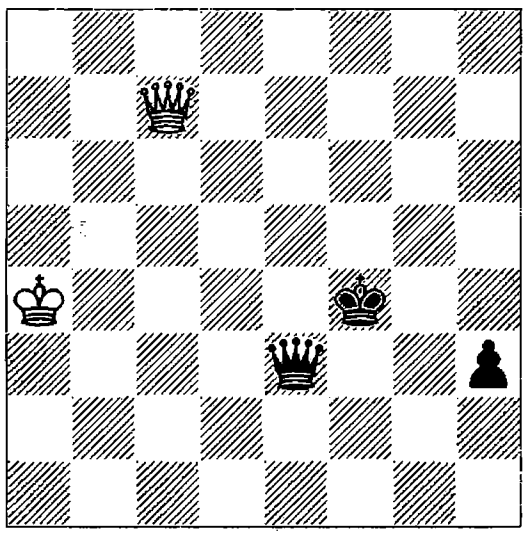
This is a more serious error, because it not only allows Black to win, but to do so relatively quickly. The only drawing move is 13 ♔a5!, which at first sight looks crazy as it allows Black to push his pawn, but after 13...h2 14 ♕g5+! White gives perpetual check; for example, 14...♔h3 (or 14...♔f2 15 ♕d2+ ♕e2 16 ♕f4+ ♔g2 17 ♕g5+, etc.) 15 ♕h6+ ♔g2 16 ♕d2+ ♕f2 17 ♕d5+ ♔g1 18 ♕d1+ and so on.

13...♔f4 14 ♕c1+

14 ♕h2+ ♕g3 transposes to the analysis of 11 ♕b1+?!.

14...♕e3 15 ♕c7+ *(D)*

B



15...♔f3?!

A major inaccuracy, lengthening the win by 19 moves. 15...♔g4! 16 ♕c8+ ♔g3 17 ♕g8+ ♔f3 was the way forward, and the checks have already run out.

16 ♔a5!

White finds the best defence. At the moment ...h2 is not a threat, so White takes the chance to improve his king position by heading towards a8.

16...♕f4!

The only move to win. 16...♕d2+? 17 ♔a6 h2 is tempting, but White can draw by 18 ♕c6+ ♔f2 19 ♕f6+ ♔e1 20 ♕a1+, etc.

17 ♕c6+

Again best; after 17 ♕c3+ ♔g4! there are no checks and the win presents fewer problems.

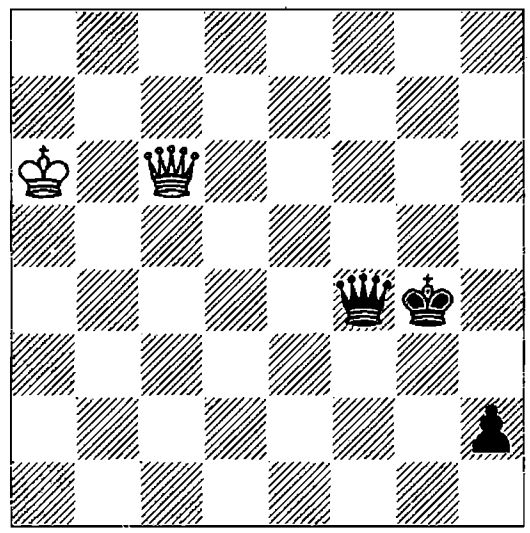
17...♔g4 18 ♔a6!

White is still not able to draw, but he is finding the best way to cause problems for Black.

18...h2? *(D)*

The wrong moment to push the pawn. The only move to win is 18...♕e5!, which is horribly difficult to find over the board. Black wants to push his pawn to h2, but only when his queen occupies an active square in the centre of the board; after 19 ♕g6+ ♔f3 20 ♕d3+ ♔g2 21 ♕d2+ ♔f1 22 ♕d1+ ♔f2 White again runs out of checks, and then Black can safely advance his pawn.

W



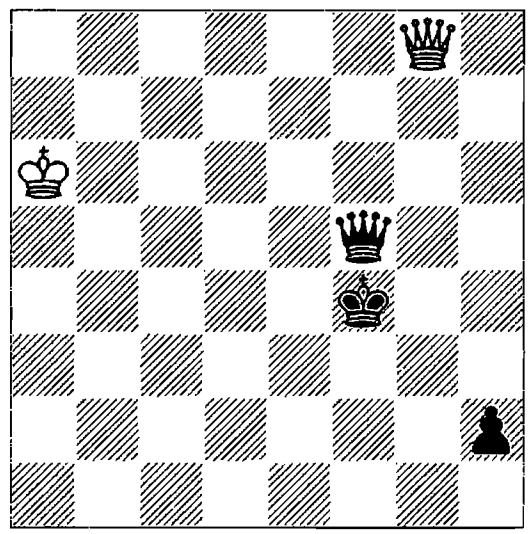
19 ♕c8+?

The wrong check. 19 ♕g2+? is also bad, in view of 19...♕g3 20 ♕e4+ ♔g5 21 ♕e7+ ♔h6 22 ♕f8+ ♔h7 23 ♕f7+ ♕g7, when the checks run out.

19 ♕g6+! is the only move to draw. After 19...♔h4 20 ♕h7+ ♔g5 21 ♕g8+! (21 ♕g7+? ♔h5 is winning for Black) 21...♔h5 22 ♕e8+ ♔h6 23 ♕h8+ ♔g6 24 ♕g8+ Black cannot get his king to the second rank.

19...♕f5 20 ♕g8+ ♔f4 *(D)*

W



Black is back on track now.

21 ♕b8+

Or 21 ♕g2 ♕d3+ 22 ♔a5 (after 22 ♔b6 ♕b1+ Black wins at once) 22...♕g3 23 ♕d2+ ♔e5! 24 ♕e2+ ♔f6 25 ♕a6+ ♔g7 26 ♕b7+ ♔h6 27 ♕c6+ ♕g6 28 ♕h1 ♕g5+ 29 ♔b4 ♕g1 30 ♕c6+ ♔g5 31 ♕d5+ ♔h4 32 ♕d8+ ♕g5 33 ♕h8+ ♔g3 34 ♕c3+ ♔g4 and Black wins.

21...♕e5! 22 ♕b4+ ♔g3 23 ♕b3+ ♔f2 24 ♕f7+

Black also wins after 24 ♕b6+ ♔e2!.

24...♔e1!

The checks have run out and the end is in sight.

25 ♕h7 ♕d6+ 26 ♔a7 ♕c5+ 27 ♔b8 ♕b6+ 28 ♔a8 ♕c6+ 0-1

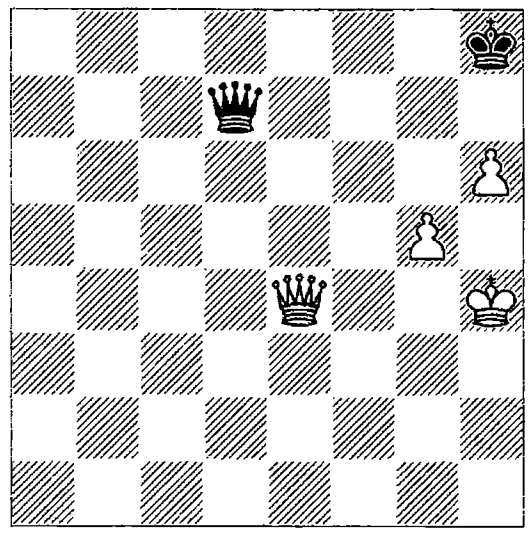
Summary:

- Revise the basic principles of ♕+♙ vs ♕ at the start of this section. While it is extremely difficult to find the correct move in every position, knowing what you should be aiming for will massively improve your results in ♕+♙ vs ♕ endings.
- The attacker has various ideas to stop the checks, such as playing the king onto the same rank as the enemy king (aiming to answer any check by a pin), or onto the rank adjacent to the king (to interpose with check). Another idea is to interpose with the queen in such a way as to set up a queen + king battery, so that the next check can be met by a discovered check.
- A centralized queen is generally better than one on the edge of the board.

7.5 Queen and Two Pawns vs Queen

Queen and two pawns generally win against a queen, but one of the most astounding discoveries to emerge from the 6-man databases was the finding that ♕+g♙+h♙ vs ♕ is generally drawn if the defending king is in front of the pawns. I think few grandmasters would have believed this possible before the database proved it. Here's a practical example.

B



Lputian – G. Haroutjunian
Armenian Ch, Erevan 2001

Even this relatively favourable position, in which White's pawns are already well-advanced, is a draw. White's main winning try is to occupy a good square with his queen, and then play his king round to f4 and then by some route to e7. He is aiming to reach a situation in which, for example, Black's king is on h7 and he meets ...♕b7+ with ♕d7, when Black's next check will be met by a discovered check. In some cases White can achieve a similar result by playing his king out via h5 and g6. The best square for White's queen is c6, and the next best is d5, while b5 is also very dangerous (because it is hard to prevent the queen from transferring to c6 or d5). Black should therefore keep his queen on d7, which covers all these squares and also makes it awkward for White's king to emerge via g4. If d7 is not available, the next best square is b7. Black's king should stay on g8 or h8 if possible. If it is on h7, then White can often play ♔g4 and meet a check on d7 or c8 by ♕f5+.

1...♕f7?

Bearing in mind the above comments, it is perhaps not surprising that this move is wrong. The waiting move 1...♔g8! was the only way to draw, when play might continue 2 ♔g3 (2 ♕f3 ♕a4+ 3 ♔h5 ♕e8+! 4 g6 ♕e5+ 5 ♔g4 ♕e6+ draws) 2...♕c7+ 3 ♔g4 ♕d7+! 4 ♔h4 and Black can meet this attempted triangulation by 4...♔h8!, which is again the only move to draw.

If Black misplaces his queen by 1...♕c7?, then he loses after 2 ♕d4+ ♔h7 3 ♕d3+ ♔h8 4

♕b5 (occupying one of the favourable squares) 4...♕f4+ 5 ♔h5 ♕f7+ 6 ♔g4 ♕c7 7 ♕d5 (the queen moves to an even better square) 7...♔h7 8 ♔f5 ♕c8+ 9 ♕e6 ♕c5+ 10 ♔f6 ♕c3+ 11 ♕e5 ♕c6+ 12 ♔e7 ♕b7+ 13 ♔d8 ♕a8+ 14 ♔d7 ♕b7+ 15 ♕c7 (this is the type of position White is aiming for) 15...♕e4 16 ♔d6+ ♔g6 17 ♕g7+ ♔h5 (Black's defensive structure has been disrupted) 18 ♕e5! and now White is clearly winning.

2 ♕d4+?!

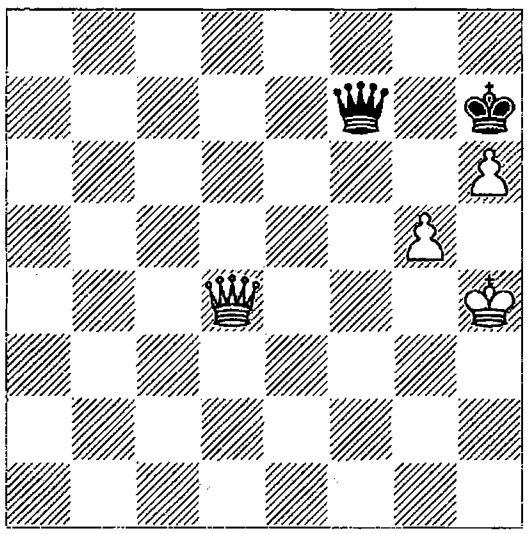
This delays the win by about 40 moves (assuming best play from both sides). 2 ♕c6, occupying the optimum square, wins quickly; for example, 2...♕f2+ 3 ♔g4 ♕e2+ 4 ♔f5 ♕d3+ 5 ♔f6 ♕d8+ 6 ♔g6 ♕d3+ 7 ♔f7 ♕b3+ 8 ♕e6 ♕b7+ 9 ♔f6 ♕f3+ 10 ♔g6 (it looks as if there should be a stalemate, but Black doesn't have any satisfactory way to sacrifice his queen) 10...♕d3+ 11 ♕f5.

2...♔h7 3 ♕d3+ ♔h8 4 ♕c3+

4 ♕b5 is best, although even after this the win is quite difficult.

4...♔h7 5 ♕d4 *(D)*

B



5...♔g8

5...♕b7 would have improved the position of Black's queen, but in this case White can still win by 6 ♔g3! ♕b3+ 7 ♔f4 ♕f7+ 8 ♕f6 ♕c4+ 9 ♔g3 ♕d3+ 10 ♕f3 ♕d7 (in this case reaching d7 with the queen does not draw due to the unfavourable position of the black king; were the king on g8 or h8 then the position would be a draw) 11 ♔f4! ♔h8 (11...♕c7+ 12 ♔g4 reveals the problem; Black lacks a check on c8 or d7) 12 ♕c3+ ♔h7 13 ♕e5 and although it is still not obvious that White is winning, it is clear that he has made definite progress in activating his king without allowing a perpetual check.

6 ♕d3 ♔h8

Repeating the position at move 3. This time White tries something different, but inferior.

7 ♔g3?

As we have seen, the idea of playing the king into the open works in some situations, but not here, and this move throws away the win. 7 ♕b5 is winning, as mentioned earlier.

7...♕c7+

The only drawing move.

8 ♔g4 ♕c8+ 9 ♔h4 ♕b7!

Excellent defence; again Black finds the only drawing move. As we have mentioned before, if Black cannot occupy d7 with his queen, then b7 is the next best square.

10 ♕c3+ ♔h7 11 ♕d3+ ♔h8

11...♔g8? is bad because after 12 ♔g3! ♕c7+ 13 ♔g4 ♕c8+ 14 ♔h5 Black cannot check on e8 and so loses.

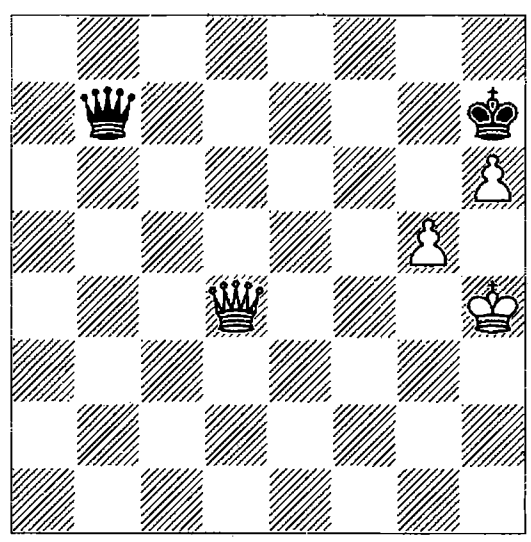
12 ♕d4+

12 ♔g3 ♕c7+ 13 ♔g4 ♕c8+ 14 ♔h5 ♕e8+ is now only a draw.

12...♔h7? *(D)*

This move should lose. 12...♔g8 was correct and after 13 ♔g3 ♕b3+ 14 ♔f4 ♕f7+ 15 ♕f6 ♕c4+ 16 ♔g3 ♕d3+ 17 ♕f3 ♕d6+ 18 ♔g4 ♕d7+ White cannot make progress.

W



13 ♔g3!

Here this idea should win.

13...♕b3+ 14 ♔h4

Although this does not throw away the win, White is going backwards. 14 ♔f4 ♕f7+ 15 ♕f6 wins as in the note to Black's fifth move.

14...♕f7 15 ♕e4+ ♔h8

After the text-move, we have repeated the position after Black's first move. 15...♔g8 is much more resilient, when White must find the difficult manoeuvre 16 ♕d3! ♔h8 17 ♕b5 in order to win.

16 ♔g3?

For the second time, White misses the quick win with ♕c6. On the previous occasion, the move he chose did not actually throw away the win, but this one does.

16...♕c7+

16...♕d7 is also good, as the queen occupies its best square.

17 ♕f4 ♕f7??

Playing for stalemate, but the move has an obvious tactical flaw. Black could have drawn by consistently playing to occupy d7 with his queen. 17...♕d7 is simplest, but 17...♕c3+ 18 ♔g4 ♕c8+ 19 ♔h4 ♕d7 would also have sufficed.

18 ♕f6+ 1-0

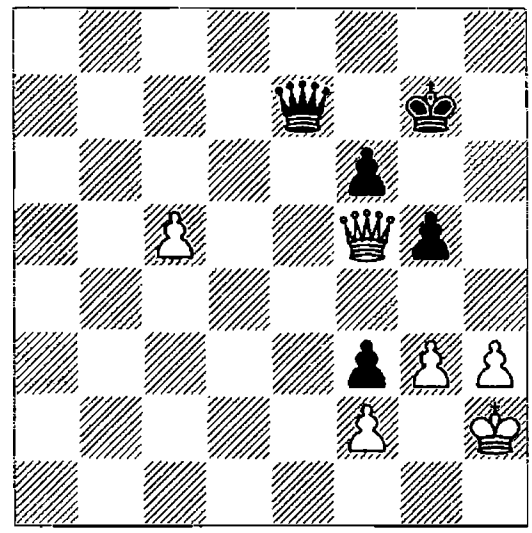
There is one final curiosity to mention regarding this game. The last pawn move occurred 39 moves before the initial diagram, so Black could actually have claimed a draw at any point from move 12 onwards, including the position in which he resigned!

In the following example Black overlooked an amazing drawing opportunity based on an exceptional position of ♕+2♙ vs ♕.

The position certainly looks winning since White has an extra outside passed pawn. White did indeed win the game and Akopian's notes in *Informator 44* suggested that there was nothing Black could have done to change this outcome. However, queen endings often contain unexpected resources and Black overlooked one which would have enabled him to save the game.

1 h4?

This looks like the most natural way to nullify the possibility of 1...♕e2, but it allows Black a remarkable drawing resource. Alternatives:



W

Akopian – Wahls

World Junior Ch, Baguio City 1987

1) 1 c6? ♕e2 2 ♕d7+ ♔g6 3 ♕d4 ♕c2 4 ♕b6 ♕c1 5 ♕b5 ♕c2 only leads to a draw.

2) 1 g4? ♕c7+ 2 ♔g1 ♕e7 and now Black threatens ...♕e1+ so White has nothing better than to liquidate to a drawn position of ♕+3♙ vs ♕+2♙ with all the pawns on one side.

3) 1 ♕d5! ♕e2 2 ♕d7+! ♔g6 (remarkably, Black's king has no good square – see the next bracket for an explanation) 3 ♕d4 ♔g7 (3...♕f1 is met by 4 ♕e4+; other squares for the black king instead of g6 would have been no better as there is always a fork on f6, d5 or e4) 4 ♕e3 nullifies Black's counterplay while retaining the extra pawn. White should then win; for example, 4...♕c4 5 g4 ♔g6 6 ♔g3 ♕d5 7 ♕e8+ ♔h6 8 c6 and the pawn advances.

1...♕e2

The only chance, as after 1...gxh4 2 gxh4 followed by ♔g3 Black loses the f3-pawn.

2 hxg5

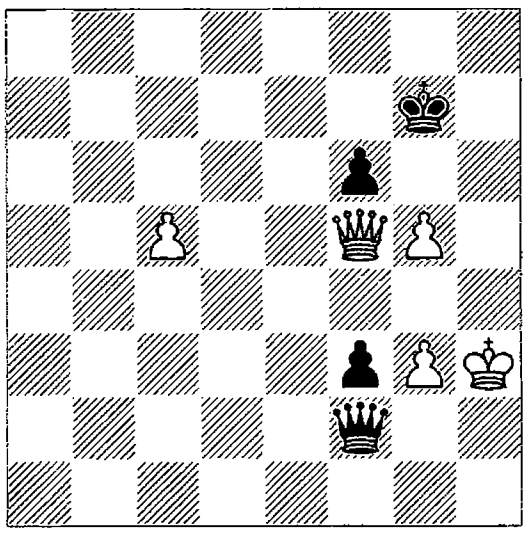
Black also draws after 2 ♕d7+ ♔f8! 3 ♕d4 g4! and the threat of ...♕f1 gives him enough counterplay; for example, after 4 ♕xf6+ ♔e8 5 ♕d4 ♕f1 it is time to give perpetual check.

2...♕xf2+

Not 2...fxg5? 3 ♕xg5+ ♔h7 4 ♕e3 and White consolidates the two extra pawns.

3 ♔h3 *(D)*

This is the critical moment, at which Black actually had two ways to draw, both based on the idea of liquidating to a drawn position with ♕+2♙ vs ♕. In order to understand one of these drawing lines, it is necessary to know that the



ending of ♕ + doubled pawns vs ♕ is drawn when the pawns are on a rook's file or knight's file, but won when the pawns are on a bishop's file or centre file. However, in the case of the pawns on the knight's file, which is the one relevant to this example, the defence is difficult. If the pawns get too far forward then they will win, so it is essential to play accurately to prevent this, which is by no means a simple task.

3...fxg5?

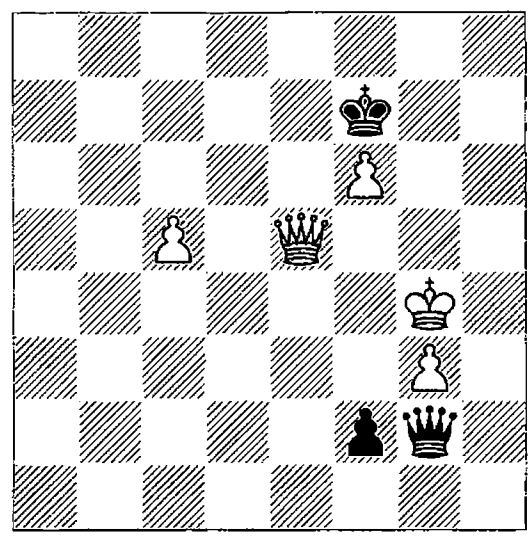
'Normal' moves are not going to be enough to save the game, and after the move played, White successfully exploits his extra pawn. Black had two ways to draw, neither of them straightforward:

1) 3...♕f1+ 4 ♔g4 (4 ♔h4 fxg5+ 5 ♕xg5+ ♔f7 offers White no winning chances) 4...♕c4+ (not 4...f2? 5 gxf6+ ♔f7 6 ♕d7+! ♔xf6 7 ♕d4+ ♔e6 8 ♔f3, when Black loses the f2-pawn and the game) 5 ♔xf3 (5 ♔h5 fxg5 6 ♔xg5 ♕d4 draws) 5...♕f1+ 6 ♔g4 and now:

1a) 6...♕e2+ 7 ♕f3 (after 7 ♔h3 ♕h5+ 8 ♔g2 ♕e2+ 9 ♕f2 ♕e4+ 10 ♔h2 fxg5 the position is very drawish) 7...♕e6+ (7...f5+ 8 ♔f4 ♕c4+ 9 ♔xf5 transposes to line 1b) 8 ♔h4 ♕c4+ 9 ♔h3 (9 ♔h5 ♕f7+) 9...♕xc5 (9...fxg5?! 10 ♕f5 ♔h6 11 ♕e5 offers White some winning chances) 10 ♕xf6+ ♔g8 11 ♔h4 with another drawn case of ♕ + doubled pawns vs ♕.

1b) 6...♕d1+ 7 ♕f3 f5+ 8 ♔f4 ♕d4+ 9 ♔xf5 ♕xc5+ 10 ♔g4 ♕c8+ 11 ♔h4 is drawn, but as explained above, a tough challenge for Black; for example, here it is far from obvious that the only two drawing moves are 11...♕d7 and 11...♕c2.

2) 3...♕g2+ 4 ♔g4 f2! is a clearer saving line; after 5 gxf6+ ♔f7 (as a matter of fact, 5...♔f8 also draws, since after Akopian's 6 ♕d3 Black can continue 6...♕c6! 7 ♔f5 ♕c8+ 8 ♔g5 ♕e6! and White cannot make progress as the f-pawn is too strong) 6 ♕e5! *(D)* we arrive at the critical point.



It's worth stopping to take a look at this position. White is threatening mate in two, Black has no checks and 6...♕b7? loses to 7 ♕h5+! ♔g8 (after 7...♔xf6 8 ♕f5+ ♔g7 9 ♕xf2 White wins on material) 8 ♕f5! ♕b4+ 9 ♔g5 ♕d2+ 10 ♔g6 followed by mate. This summary suggests that it is time for Black to resign, but this is where imagination plays an important role. Black can draw by 6...♕xg3+! 7 ♔xg3 (7 ♕xg3 f1♕ is even worse as the f6-pawn falls at once; note that in this case the result is almost sure to be a draw, as White's king is not supporting the c-pawn while Black's king is rather close, and therefore Black should be able to get his king in front of the pawn) 7...f1♕. At first sight this offers Black no hope, for not only is he two pawns down but in addition White has a juicy check on e7. However, the more one looks at the position, the more Black's position looks tenable. White can only save the f6-pawn by checking on e7 and g7, but then Black's king is in an active position while White's queen is stuck in the corner, and even at a glance the likelihood of perpetual check seems rather high. The analysis runs 8 ♕e7+ (8 c6 ♕g1+ 9 ♔h4 ♕h1+ 10 ♔g5 ♕g2+ is also a draw) 8...♔g6 9 ♕g7+ ♔f5 10 c6 ♕f4+ 11 ♔g2 ♕d2+ 12 ♔h3 ♕c3+ 13

♕g3 ♕xc6 14 ♕f2+ ♔g6 15 f7 ♕e6+ with a clear draw.

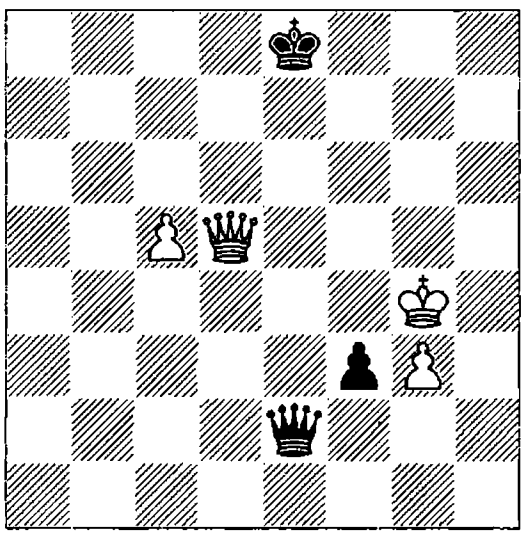
4 ♕xg5+ ♔f7 5 ♔g4

Black's f3-pawn is exposed to attack and his queen is out of play, so White should win provided he takes a little care.

5...♕e2 6 ♕d5+ ♔e8 *(D)*

After 6...♔g7 7 ♕xf3 ♕c4+ 8 ♕f4 ♕xc5 9 ♕g5+ White wins at once.

W



7 ♕c6+!

Although the alternative 7 ♕xf3?! ♕c4+ 8 ♕f4 ♕xc5 9 ♕e4+ ♔d8 10 ♔h4 does win in theory, it takes a massive 78 moves to force mate from this point. The move played is much simpler since Black doesn't have a good square for his king.

7...♔e7

After 7...♔d8 8 ♕xf3 ♕c4+ 9 ♕f4 ♕xc5 10 ♕g5+ White forces the exchange of queens.

8 ♕xf3 ♕e6+

8...♕c4+ 9 ♕f4 ♕xc5 10 ♕g5+ and White wins as before.

9 ♕f5

Now White has consolidated his two extra pawns and the win is relatively simple.

9...♕e2+ 10 ♔g5 ♕e3+ 11 ♔h4 ♕c3

After 11...♕h6+ 12 ♔g4 there are no more checks.

12 g4 ♕h8+ 13 ♔g5 ♕g7+ 14 ♔h5

14 ♔f4 is even quicker as the checks dry up immediately.

14...♕a1

14...♕h8+ 15 ♔g6 ♕g8+ 16 ♔h6 is also decisive.

15 g5 ♕h1+ 16 ♔g6 ♕g2 17 c6! 1-0

After 17...♕xc6+ 18 ♕f6+ it's all over.

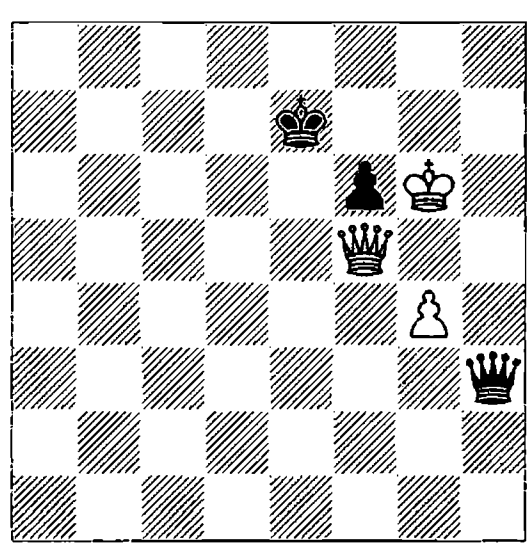
Summary:

- ♕+2♙ vs ♕ is normally winning. A notable exception is ♕+g♙+h♙ vs ♕, which the tablebases have shown to be generally drawn when the defender's king is in front of the pawns.
- Other positions may be drawn if one of the pawns is vulnerable to attack, but this is unusual.

7.6 Queen and Pawn vs Queen and Pawn

Until the advent of computer databases, the winning chances in ♕+♙ vs ♕ were generally underestimated, and this had a knock-on effect on other queen endings. In particular, ♕+♙ vs ♕+♙ was hardly considered an ending worth looking at, as it was felt that almost all positions were drawn. This isn't true at all, as in some cases the attacker can win the enemy pawn while ensuring a transition to a winning ♕+♙ vs ♕ position. Although the following example is initially drawn, it only takes one mistake by Black to fall into a lost position.

B



Beliavsky – R. Byrne
Moscow 1975

In due course Black will lose the f6-pawn, after which an ending with ♕+g♙ vs ♕ will ensue. The important point to recall about this ending is

that if the black king cannot get in front of the g-pawn, it should head for the a1-corner.

1...♕h4

Black can also draw by 1...♕c3, but it requires a series of 'only' moves: 2 ♕d5 ♕c2+! 3 ♔g7 ♕e2! 4 ♕f7+ ♔d6 5 ♕xf6+ ♔c5! 6 g5 ♔b4! (running to a1 as quickly as possible) 7 g6 ♔b3 (7...♔a3? loses to 8 ♔f8! because Black will have no check on the a3-f8 diagonal) 8 ♔f7 ♕b5 9 ♕e6+ ♔b2! 10 g7 ♕b7+ and Black's king is near enough to a1 to draw.

2 ♕c5+ ♔e8 3 ♕c8+ ♔e7 4 ♕f5

Black is very close to zugzwang here. At the moment his king is far away from a1, so the loss of the f6-pawn would be fatal. Fortunately, he still has one move to cling on to the pawn.

4...♕h8 5 ♕e4+ ♔d6

5...♔d7? 6 ♕d5+ ♔c7 7 ♕f7+ ♔c8 8 ♕xf6 ♕g8+ 9 ♕g7 ♕e6+ 10 ♔h7 ♕e4+ 11 ♔h8 ♕h1+ 12 ♕h7 ♕a1+ 13 ♔g8 ♕a2+ 14 ♕f7 ♕g2 15 ♕f5+ ♔d8 16 g5 leads to a typical winning position for White.

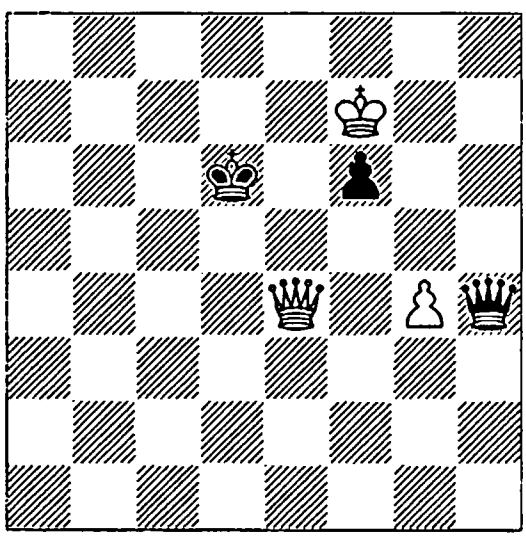
6 ♔f7

Now the f6-pawn is doomed, and Black's only hope is to head for a1 as fast as possible.

6...♕h4? *(D)*

6...♔c5! 7 ♕e7+ ♔c4 8 ♕xf6 ♕h7+ 9 ♔f8 ♕e4 10 g5 ♔b3 leads to a draw.

W



7 ♕f5?!

This wins, because Black's king is now cut off from a1, but it would have been quicker to play 7 ♕d4+ ♔c7 8 ♕c5+ ♔b7 9 ♕f5, driving Black's king back before occupying f5.

7...♔c7?!

Black tries to hang on to the pawn, with the result that he is eventually forced to give it up in very unfavourable circumstances. Offering it immediately by 7...♕h1! 8 ♔xf6 ♕a1+ 9 ♔g6 ♕a8 10 g5 ♕g8+ 11 ♔h6 ♕h8+ 12 ♕h7 ♕d4 would have offered more resistance. White's queen is offside and it requires a great deal of work to win here; one line is 13 ♕b7! ♕h4+ 14 ♔g6 ♔c5 15 ♕f3! (the only move, cutting Black's king off from a1) 15...♔b4 16 ♔f5! ♕h7+ 17 g6 ♕d7+ 18 ♔g5 ♕e7+ 19 ♔g4 ♕e6+ 20 ♕f5 ♕e2+ 21 ♔f4 ♕d2+ 22 ♔e5 ♕c3+ 23 ♔d6 ♕d4+ 24 ♔e6 ♔a4 25 ♔f7 ♕c4+ 26 ♔e8 ♕g8+ 27 ♔e7 ♕g7+ 28 ♕f7 ♕d4 29 ♕a2+ ♔b4 30 ♕e6! (another 'only' move) 30...♕g7+ 31 ♕f7 ♕e5+ 32 ♔d7 ♕b5+ 33 ♔c8 ♕c5+ 34 ♔b7 and the checks run out, although there is still a fair way to go.

8 ♕c5+ ♔b7 9 ♕h5

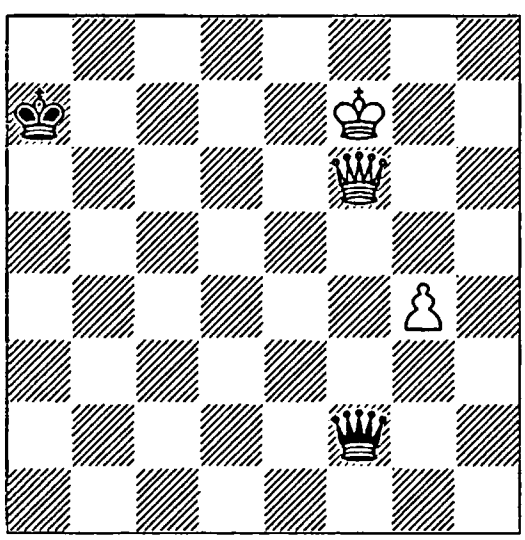
This dislodges the queen from h5, so that it can no longer both defend f6 and attack g4.

9...♕f2

Now White, by a series of checks, can pick up the f6-pawn.

10 ♕d5+ ♔c7 11 ♕c4+ ♔b7 12 ♕e4+ ♔b8 13 ♕e8+ ♔a7 14 ♕e7+ ♔a8 15 ♕d8+ ♔a7 16 ♕xf6 *(D)*

B



Black's king is almost the whole length of the board away from a1, so there is no doubt that White is winning.

16...♕g2 17 g5 ♕d5+ 18 ♔g7

This position illustrates why the king is poorly placed on a7; Black has only managed to give one check and already he has no more.

18...♕h1 19 g6 ♕h2 20 ♕d4+

20 ♔g8 ♕b8+ 21 ♕f8 followed by g7 is simpler.

20...♔a6 21 ♔f6 ♕h6 22 ♕e5 ♔a7 23 ♔f7 ♕h3 24 g7

It's all over now.

24...♕f3+ 25 ♔e7

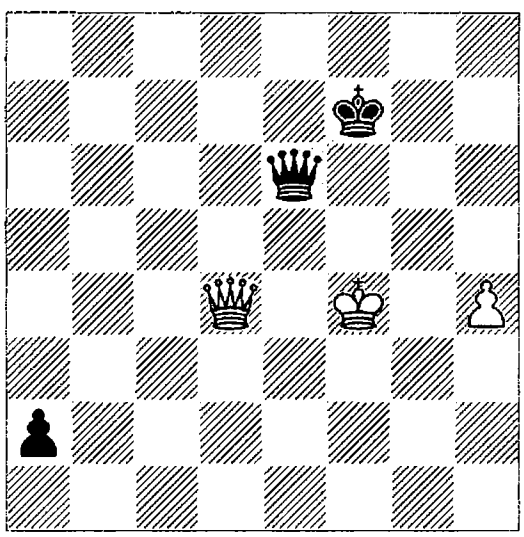
25 ♕f6 ♕b3+ 26 ♕e6 ♕f3+ 27 ♔e8 ♕a8+ 28 ♔e7 is even quicker.

25...♕a3+ 26 ♔d8 ♕d3+ 27 ♔e8 ♕c4 28 ♔f8 ♕f1+ 29 ♔e7 ♕c4 30 ♕e3+ ♔b7 31 ♕f3+ ♔b6 32 ♕f6+ 1-0

It's an immediate win after 32...♔a5 33 ♕g5+ or 32...♔a7 33 ♕f7.

In the following case, the attacker's pawn is already on the seventh rank.

W



Nunn – Matulović
Birmingham 1975

Decades ago, it was thought that almost all positions of ♕+♙ vs ♕ with the pawn on the seventh were drawn (for example, Fine's *Basic Chess Endings* supported this view), but as the years passed it gradually became clear that there were many more winning positions than were supposed. Even so, it was still felt that positions with a rook's pawn on the seventh rank were mostly drawn. Consequently, when this position arose in one of my games from the mid-1970s, I believed that White, with his well-centralized queen and with a pawn of his own, could count on saving the game. The fact that the game did end in a draw against a grandmaster only reinforced my feeling.

I was therefore astonished when the ♕+♙ vs ♕+♙ database was constructed, just a few years ago, to discover that not only is White losing, but Black's win is fairly simple. Moreover, this isn't due to some freak placing of the pieces. If we move White's king around and assume it is White to play, then there is a drawing zone near the enemy pawn (consisting of a1, b1, c1, d1, b2, c2, a3, b3, c3, a4 and b4) but otherwise the only drawing squares are h1, h2, h7 (in these cases 1 ♕f4+ is the only drawing move), h8 (only drawing move 1 ♕a7+) and g5 (only drawing move 1 h5).

1 ♕a7+

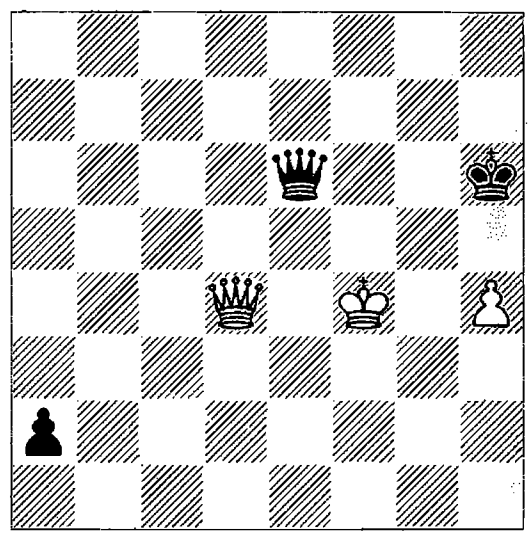
In order to meet the threat of ...♕f6+, White must try to check Black's king to a more passive position.

1...♔g8 2 ♕g1+

2 ♕b8+? loses at once to 2...♔g7! as there are no more checks.

2...♔h7 3 ♕a7+ ♔h6 4 ♕d4 *(D)*

B



Up to here both sides have played optimal moves.

4...♕f7+

This preserves the win, but makes it more complicated. The surprising move 4...♕g8! (4...♔h5 doesn't help as 5 ♕c5+ forces the king back) offers the simplest win. The threat is 5...♕g7 6 ♕d6+ ♔h7 7 ♕d3+ ♔g8, when there are no more checks. White is surprisingly helpless to meet this threat; for example, 5 ♕f6+ ♔h7 6 ♕a6 loses after 6...♕f8+ 7 ♔e4 ♕b4+ 8 ♔d5 ♕b3+ and the next check will cover a1.

5 ♔e3 ♕g7

5...♔h7 is more accurate.

6 ♕f4+ ♔h7 7 ♕e4+ ♕g6 8 ♕e7+ ♔h6

The wrong way.

9 ♕f8+ ♔h7 10 ♕e7+ ♔g8

Back on the correct path, but Black's inaccuracies mean that he is actually further away from the win now than he was in the initial diagram.

11 ♕d8+ ♔f7 12 ♕c7+ ♔f8

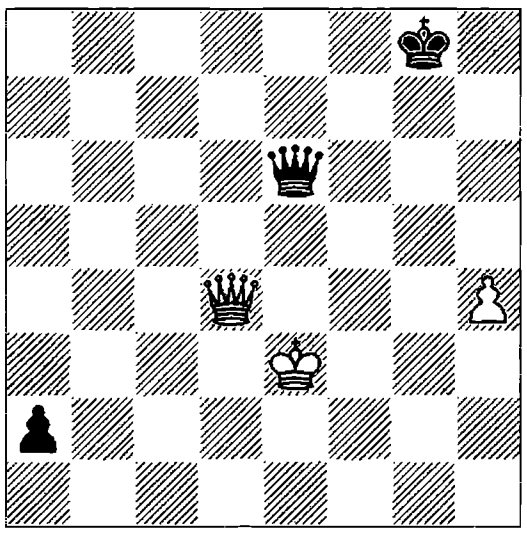
Not 12...♔g8? 13 ♕b8+ and White wins the pawn.

13 ♕c5+ ♔g8 14 ♕d5+ ♕f7 15 ♕d4

White continues his stiff resistance – indeed every move he has played so far has been optimal in the sense of not reducing the number of moves required for Black to win.

15...♕e6+ *(D)*

W



16 ♔d2

Once again White places the greatest obstacles in Black's path. Now that the white king is relatively close to the enemy pawn, Black will have to continue accurately. 16 ♔f4?! loses at once to 16...♕h6+ 17 ♔f3 ♕g7.

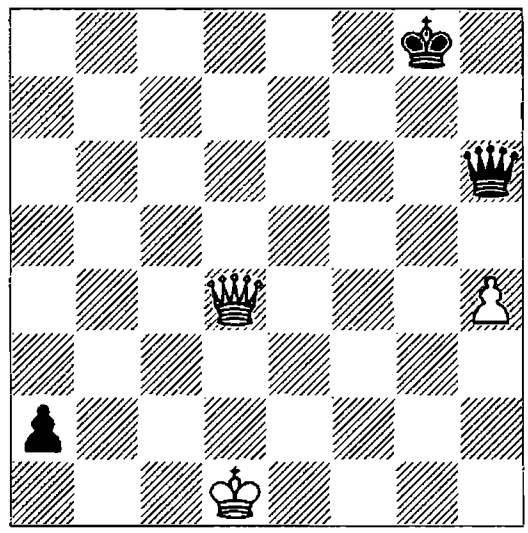
16...♕h6+?

Faced by White's determined resistance, Black finally goes wrong and throws the win away. 16...♕f5! would still have won, but of course this is a difficult move to see. After 17 ♔e3 (17 ♕c4+ ♔h7 18 ♕c7+ ♔h6 19 ♕c6+ ♔h5 20 ♕e8+ ♔g4 21 ♕g8+ ♔h3 22 ♕b3+ ♔xh4 23 ♕a4+ ♔g3 24 ♕a3+ ♕f3 is also winning for Black) 17...♕h3+ 18 ♔f2 ♕e6 19 h5 (it turns out that this weakens the h-pawn, but otherwise Black wins with either ...♕g6 or ...♔f7) 19...♕f5+ 20 ♔e3 ♕h3+ 21 ♔f2 ♕h2+ (now this wins, as the h-pawn is vulnerable) 22 ♔f3 ♕xh5+ 23 ♔f2 ♕g6 the end is close.

17 ♔d1! *(D)*

The only move to save the game, avoiding the trap 17 ♔c2? ♕g6+ 18 ♔d2 ♕g2+, when Black wins. Now the draw is relatively simple.

B



17...♕g7 18 ♕d8+ ♔h7 19 ♕d3+ ♔h8

19...♔h6 20 ♕a6+ draws.

20 ♕d8+ ♕g8 21 ♕d4+ ♔h7 22 ♕a7+ ♔g6 23 ♔c2 ♔h5 24 ♔b2 ♕g2+ 25 ♔a1 ½-½

I'm still rather proud of playing 25 consecutive optimal moves in this ending!

Summary:

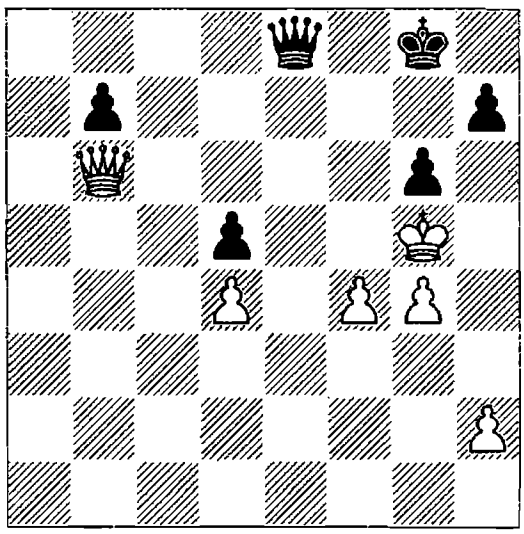
- Endings with ♕+♙ vs ♕+♙ offer more winning chances than is generally supposed.
- If the pawns are not passed, the attacker must try to win the enemy pawn in such a way as to force a transition to a won ♕+♙ vs ♕ position. If the defender's pawn is doomed, he needs to be aware of where his king will be best placed in the resulting ♕+♙ vs ♕ position, since he may be able to use the time taken to win his pawn to march his king into the drawing zone.

7.7 Liquidation to a Pawn Ending

In a queen ending, it's often possible for one player to liquidate to a pawn ending. This is often a cause of errors, because features of the position which were unimportant in the queen

ending may assume paramount importance once the queens have been exchanged.

B



J. Howell – Zakić
Vienna 1989

If anything, it looks as though White has the advantage with his actively placed pieces. However, the outside passed b-pawn presents a lurking danger, which Black managed to exploit by forcing the exchange of queens.

1...♕e7+ 2 ♕f6

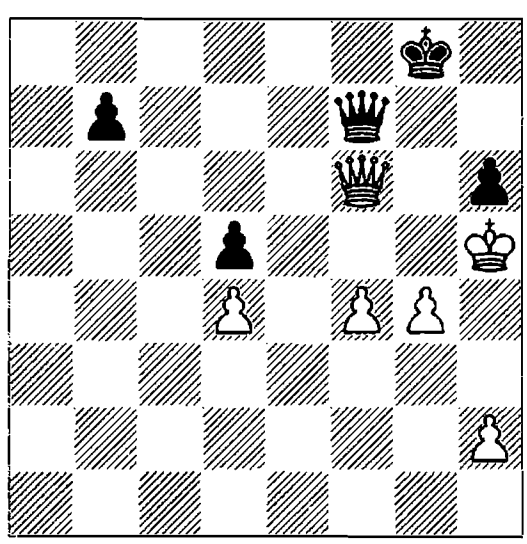
Forced, in view of 2 ♔h6 ♕h4#.

2...h6+!

This was probably the move White overlooked. 2...♕xf6+?? 3 ♔xf6 is the wrong way to exchange queens, because after 3...b5 (after 3...♔f8 4 ♔e6 White wins the d-pawn while remaining in the square of the b-pawn) 4 ♔e7 b4 5 f5 gxf5 6 gxf5 b3 7 f6 b2 8 f7+ White promotes with check and wins easily.

3 ♔xg6 ♕h7+ 4 ♔h5 ♕f7+ *(D)*

W



Black's pawn sacrifice has allowed him to force the exchange of queens while keeping White's king offside, giving his b-pawn a free run home.

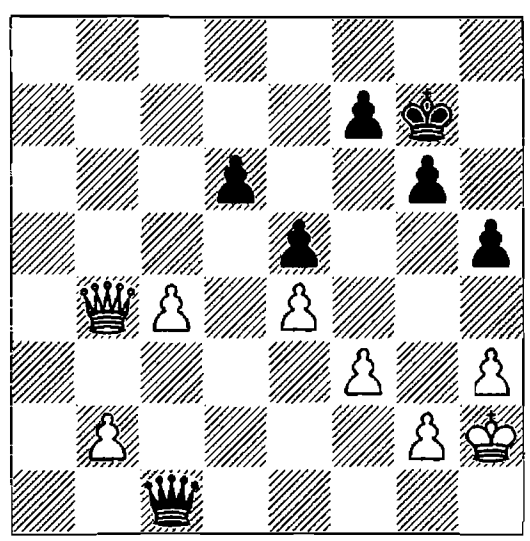
5 ♕xf7+ ♔xf7 6 ♔xh6 ♔g8! 0-1

6...b5?? 7 ♔h7 b4 8 g5 would be a horrible mistake, giving White a winning position.

The move played is the last finesse, a neat switchback by the black king to prevent White from forcing his g-pawn home. The finish could be 7 ♔g6 (White's king is badly placed on the h-file, and although Black's passed pawn is still on its original square, there is no way out; 7 f5 b5 8 f6 b4 9 g5 b3 10 g6 b2 11 f7+ ♔f8 12 ♔h7 would save White except for the unfortunate detail that 12...b1♕ pins the g6-pawn) 7...b5 8 ♔f6 ♔f8! (not 8...b4?? 9 ♔e7) and Black wins.

Judging the result of a queen exchange can be quite tricky. Here both players got it wrong: one during the game and one in his annotations.

W



Banas – Möhring
Stary Smokovec 1977

It's often hard to win queen endings with an extra pawn because of the possibility of perpetual check. Here White's king is fairly exposed to checks and his queen is offside, which doesn't make his task any easier.

1 h4

The alternative was to grab the d-pawn and hope for the best: 1 ♕xd6 ♕f4+ 2 ♔g1 ♕c1+ 3 ♔f2 ♕xb2+ 4 ♔g3 h4+! 5 ♔h2 (after 5 ♔xh4? ♕f2+ 6 g3 ♕xf3 7 ♕xe5+ f6 it's time for White

to give perpetual check by 8 ♕e7+ ♔h6 9 ♕f8+ – otherwise he will lose) 5...g5 and it will be very hard for White to make progress in view of the persistent danger of perpetual check. For example, 6 c5 f6 7 c6 ♕c1 is an immediate draw as White cannot both defend the c-pawn and avoid the checks.

1...♕f4+ 2 ♔h3 ♕c1

Black now threatens serious kingside counterplay by 3...f5, so White cannot afford to wait.

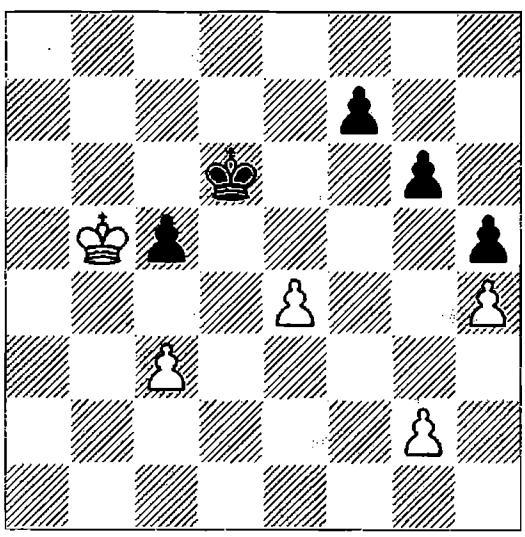
3 ♕c3

The only realistic winning attempt, but obviously it depends on the king and pawn ending being a win if Black swaps queens.

3...♕h1+?

The wrong choice. According to the notes by Banas in *Informator 24*, White also wins if Black exchanges queens, but this is not so and therefore the check on h1 was the losing move. After 3...♕xc3 4 bxc3 ♔f8 (the extra doubled c-pawn is not sufficient advantage to win) 5 ♔g3 ♔e7 6 f4 ♔d7 (Black can even draw by playing actively: 6...♔e6 7 ♔f3 f5! and White has no winning chances) 7 c5!? (the only realistic winning attempt) 7...dxc5 (not 7...exf4+? 8 ♔xf4 dxc5 9 ♔e5 and the white king's active position is decisive) 8 fxe5 ♔e6 9 ♔f4 ♔e7 10 ♔e3 ♔e6 11 ♔d3 ♔xe5 12 ♔c4 ♔d6 (not 12...♔xe4? 13 ♔xc5 ♔f4 14 c4 ♔g3 15 ♔d4 ♔xg2 16 c5, when White wins comfortably) 13 ♔b5 *(D)* we arrive at the crucial moment.

B



Here Banas only gave 'followed by c4, winning', which looks plausible enough, but Black can draw by accurate play: 13...f6! 14 c4 g5 (the point is that Black can advance his kingside pawns significantly before he is forced to play ...♔e5) 15 g3 (or 15 ♔b6 gxh4 16 ♔b5 ♔e5 17 ♔xc5 ♔xe4 18 ♔d6 f5 19 c5 h3 20 gxh3 f4 21 c6 f3 and both sides promote together) 15...g4 16 ♔b6 ♔e5 17 ♔xc5 ♔xe4 18 ♔d6 f5 19 c5 f4 20 gxf4 g3 21 c6 g2 22 c7 g1♕ 23 c8♕ with a draw.

4 ♔g3

With e1 covered, there is no perpetual check, while White has a passed pawn on the queenside.

4...♕a1

4...g5 5 hxg5 h4+ 6 ♔f2 h3 7 gxh3 ♕xh3 8 b4 is also without hope for Black, as White's king can easily avoid the checks by fleeing to the queenside.

5 ♕d2! ♕a2

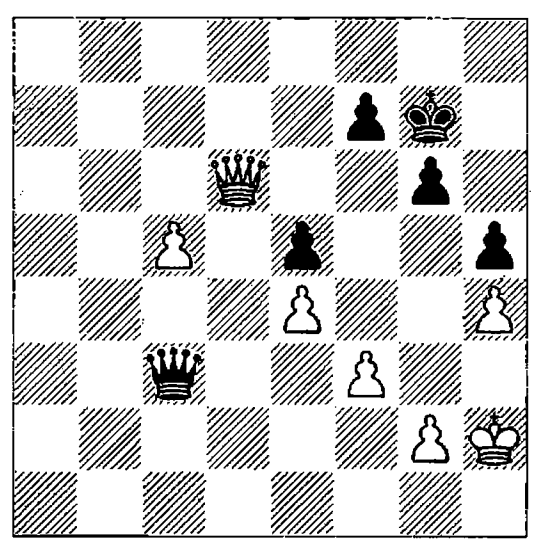
Black once again prevents the b-pawn's advance by means of a pin, but this does not save him.

6 ♕xd6 ♕xb2 7 c5

The c-pawn is too strong, especially as Black must look after the weak e5-pawn.

7...♕c3 8 ♔h2! *(D)*

B



The simplest move, as Black's queen cannot even threaten a check while it is tied to the defence of e5.

8...♔h7 9 c6 ♕c1 10 ♕e7

10 ♕f6! ♕c4 11 ♔g3 is even simpler, placing Black in zugzwang. Then Black's queen cannot move, because it must cover both c7 and f7, while 11...♔g8 loses to 12 ♕d8+ ♔g7 13 c7.

10...♕xc6 11 ♕xf7+ ♔h8 12 ♕f8+ ♔h7 13 ♕e7+ ♔g8 14 ♕xe5

With two extra pawns, the win is simple.

14...♕c1 15 ♕f6 ♔h7 16 e5 ♕c7 17 f4 ♕c3 18 f5 1-0

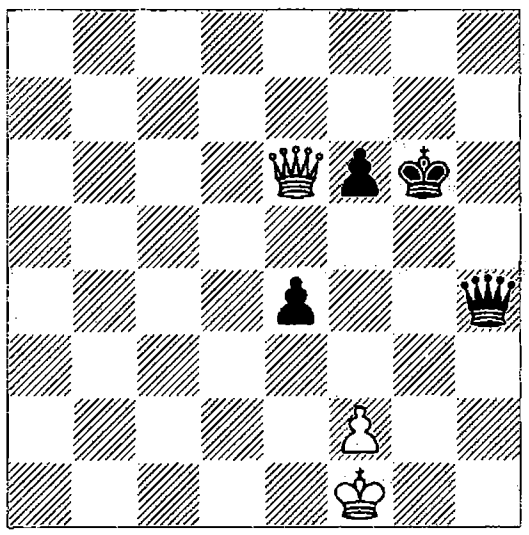
Summary:

- If queens are exchanged, then the position is transformed and factors that were unimportant with queens on the board may now decide the game.
- The necessity to readjust one's thinking to cope with the new situation is one reason why queen exchanges are often misjudged.

7.8 Common Error: Random Checking

One of the most frequent mistakes in queen endings is to give a series of checks without any clear purpose in mind. Such checks are not only unhelpful, but they can easily improve the enemy position by, for example, chasing his king to a more active square. Here's a typical case.

B



Khadilkar – Muresan
Women's Interzonal, Zheleznovodsk 1985

Black is a pawn up and her pieces are more actively placed, but this advantage should not be sufficient to win. She has no passed pawn and the numerous possibilities to annoy the black king with checks mean that White should have little trouble holding a draw. Yet it is a paradox that drawable queen endings are regularly lost in practice, and this is one such case. The ability to give many checks is a double-edged sword; it is often quite hard to decide between several similar-looking checks, and in extreme cases the checks may even be counter-productive. In this example, White makes the common queen ending error of giving a check when a non-checking move would be better; indeed, this happens more than once. It is instructive to see how this type of mistake can cause a comfortably drawn position to drift downhill into a loss.

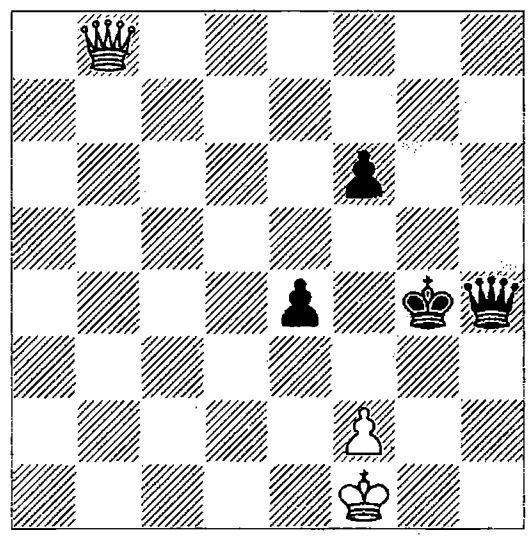
1...♔g5

This allows White to draw rather easily, since Black's queen is temporarily offside. Objectively speaking, it might have been better first to centralize the queen by 1...♕h1+ 2 ♔e2 ♕h5+ 3 ♔e1 ♕f5 before trying to manoeuvre with the king, but as the move played soon induces a mistake by White, it is hard to criticize it.

2 ♕g8+ ♔f4 3 ♕b8+ ♔g4 *(D)*

After 3...♔f3 the king is driven back by 4 ♕b3+.

W



Up to this point there was nothing wrong with White's checks, but now the first unfortunate mistake occurs; White checks on g8, allowing Black to improve her queen position with gain of tempo.

4 ♕g8+?!

Now was the moment for 4 ♔e2! since Black has no checks, and so White can take the opportunity to move her king to a better position where it prevents any possible penetration by the black king to f3. In this case White should

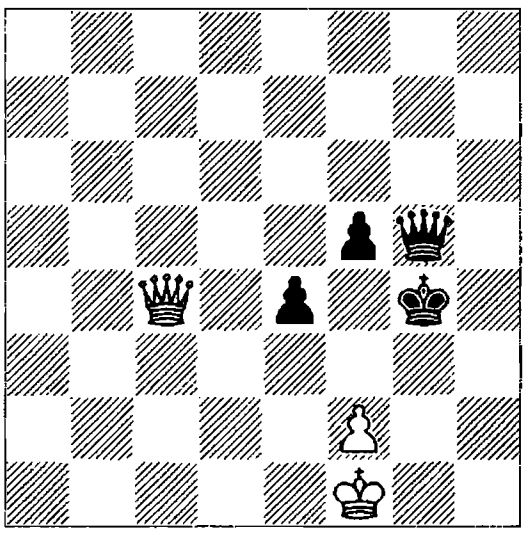
draw without difficulty. Instead, White continues the barrage of checks as if by reflex, without considering whether a quiet move might be better.

4...♕g5! 5 ♕c4

White cannot continue checking for long, since 5 ♕c8+ may be met by 5...f5, after which 6 ♕c3 transposes to the game.

5...f5 *(D)*

W



6 ♕c3

6 ♕c7 is simpler, since then 6...f4 7 ♕d7+ ♕f5 (7...♔h4 8 ♕h7+ picks up the e4-pawn) 8 f3+ exf3 9 ♕xf5+ leads to a drawn king and pawn ending. However, the move played is also adequate if followed up correctly.

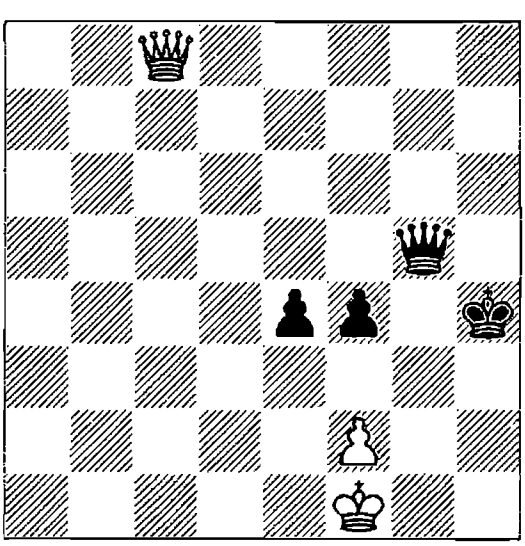
6...f4! 7 ♕c8+

This is the soundest move, activating the queen with gain of tempo.

7...♔h4 *(D)*

7...♔f3?? even loses after 8 ♕h3+.

W



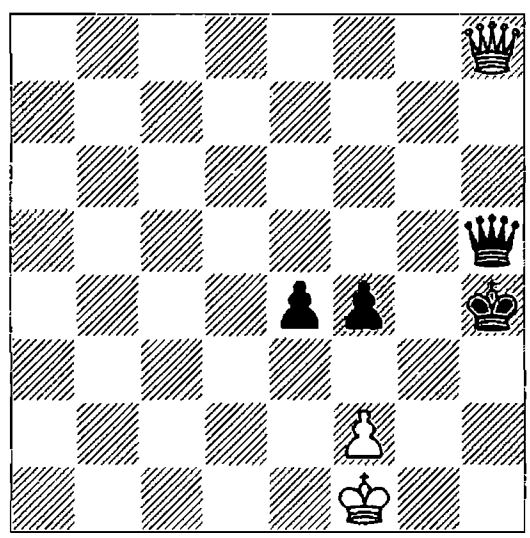
8 ♕h8+?

There is a curious similarity between this mistake and that at move four: in both cases Black is allowed to improve the position of her queen with gain of time, but on this occasion the mistake is more serious because it gives Black a winning position.

A simple draw could have been secured by 8 ♕e6!, attacking the e4-pawn (8 ♕c6 and 8 ♕e8 draw the same way). The pawn can only be defended at the cost of playing the queen far away from the black king; for example, 8...♕b5+ 9 ♔g1 ♕b1+ 10 ♔h2 ♕b7 11 ♕f5!.

8...♕h5! *(D)*

W



Suddenly White is lost; there is little she can do to prevent Black's king from advancing to h3 and h2, after which it will not only be relatively safe from checks but will also be able to lend a hand in a direct attack against White's king.

9 ♕d8+

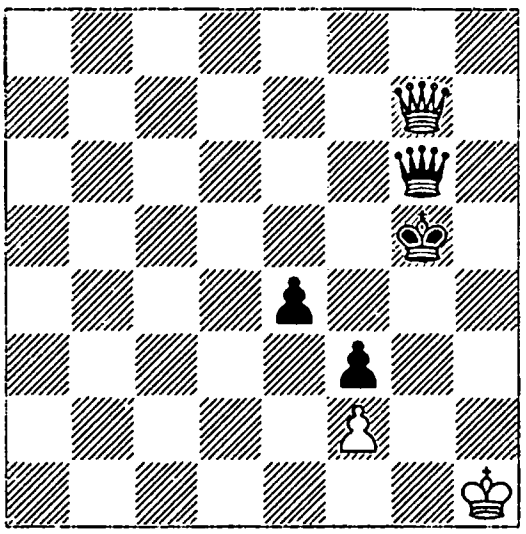
Other moves also lose:

1) 9 ♕f6+ ♔h3 10 ♕e6+ (10 ♕xf4 ♕d1#) 10...♔h2 11 ♕xe4 (11 ♔e1 ♕f3 12 ♕h6+ ♔g1 13 ♕g5+ ♕g2 14 ♕xf4 ♕f1+ 15 ♔d2 ♕xf2+ also wins for Black) 11...♕d1+ 12 ♕e1 ♕xe1+ 13 ♔xe1 f3 14 ♔d2 ♔g1! 15 ♔e3 ♔g2 and Black wins.

2) 9 ♕g7 is the most resilient defence, but Black still wins by careful play: 9...♕d1+! 10 ♔g2 f3+ 11 ♔h2 ♕d6+ 12 ♔h1 ♕e6! (threatening ...♕h3+ followed by ...♕g4+; Black's threats to exchange queens or even to deliver mate now prove decisive) 13 ♕g3+ (after 13 ♕h7+ ♔g5 14 ♕g7+ ♕g6 15 ♕e5+ ♔g4 Black

wins more quickly) 13...♔h5 14 ♕h2+ ♔g5 15 ♕g3+ ♕g4 16 ♕e5+ ♕f5 17 ♕g7+ (17 ♕g3+ ♔h5 18 ♕h2+ ♔g6 19 ♕d6+ ♕f6 20 ♕g3+ ♕g5 21 ♕d6+ ♔h5 ends the checks) 17...♕g6 *(D)* and now:

W



2a) 18 ♕e5+ ♔g4 19 ♕c7 ♕h6+ 20 ♔g1 ♔f5! 21 ♕f7+ (after other checks, the black king withdraws to h7, which stops the checks as Black can interpose on the g-file with check) 21...♕f6 22 ♕d5+ ♔f4 23 ♕d2+ ♔g4 24 ♕d7+ ♔h5 25 ♕h7+ ♕h6 26 ♕c7 ♕g5+ 27 ♔f1 ♕g2+ 28 ♔e1 ♕g1+ and Black wins.

2b) 18 ♕e7+ ♔h6 19 ♕f8+ ♔h7 20 ♕e7+ ♔h8 21 ♕e5+ (21 ♕f8+ ♕g8 22 ♕f6+ ♕g7 23 ♕d8+ ♔h7 also wins for Black) 21...♔g8 22 ♕d5+ ♔h7 23 ♕d7+ ♔h6 24 ♕h3+ ♕h5 25 ♔g1! (a neat trick which, however, doesn't change the evaluation of the position) 25...♔g5! 26 ♕f1 ♕g4+ 27 ♔h1 ♔h4 28 ♔h2 ♕c8 and White is in zugzwang and must now allow the exchange of queens by 29 ♔h1 ♕h3+.

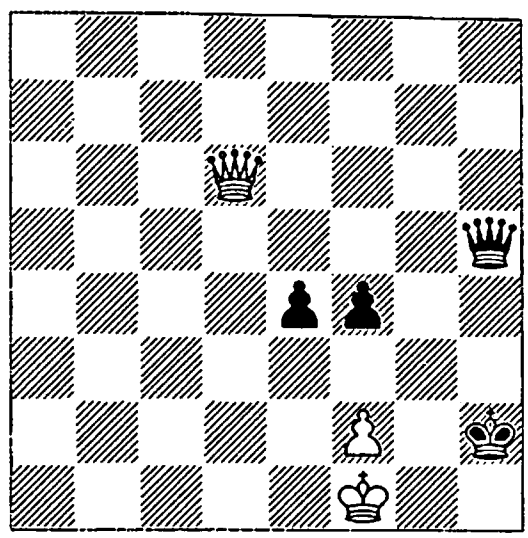
9...♔h3! 10 ♕d7+ ♔h2

White has no chance with Black's pieces in such active positions.

11 ♕d6 *(D)*

Other moves also lose, in most cases to ...♕f3 followed by ...♔g1; for example, 11 ♕d4 ♕f3 12 ♔e1 ♔g1 13 ♕g7+ ♕g2, 11 ♔e1 ♕f3 12 ♕e6 ♔g1 13 ♕a2 e3 or 11 ♕a4 ♕f3 12 ♔e1 ♔g1 and Black wins in every case.

B



11...♕b5+

The direct 11...♕f3 would have been quicker, but Black prefers to transfer her queen to f3 with checks.

12 ♔e1 ♕b1+ 13 ♔e2

13 ♔d2 ♕b2+ is similar.

13...♕c2+ 14 ♔e1 ♕c3+! 15 ♔e2

Or else Black exchanges queens on d3.

15...♕f3+ 16 ♔e1 ♔g1! 17 ♕d4

After 17 ♕d2 e3 Black wins at once.

17...♕g2! 0-1

Black threatens to play ...♕f1+ followed by ...♕xf2+, while 18 f3+ e3 is also hopeless for White.

Summary:

- The defender should not check automatically. Only check if it serves a constructive purpose, since otherwise you may be helping your opponent.

This concludes Volume 1 of *Nunn's Chess Endings*. Volume 2 deals with all endings containing rooks.

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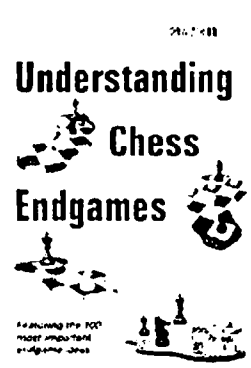

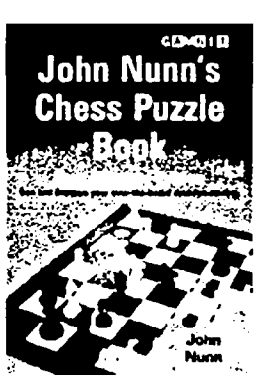

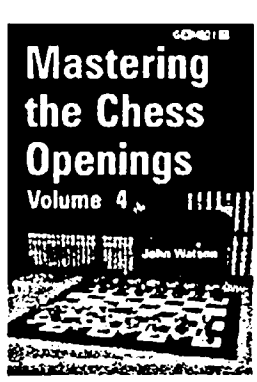

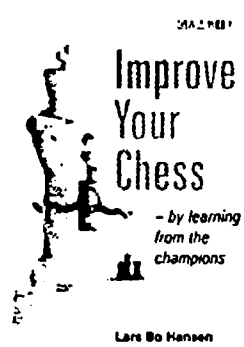

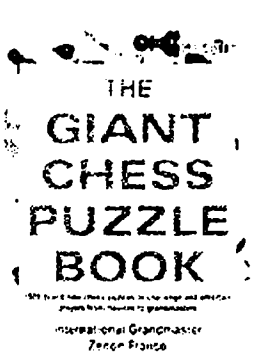

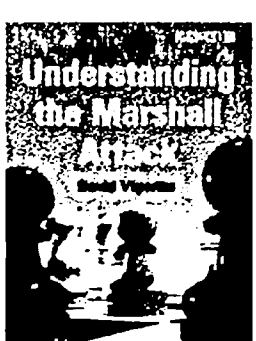

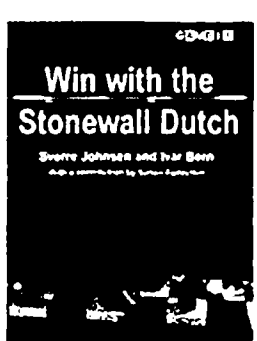

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